



WILL BEACHAM BARCELONA

As the year draws to a close, we welcome you to the ICIS Top 40 Power Players for 2018. Each year senior editorial staff vote for the industry executives they believe have had the most powerful impact on the global chemical industry. Leading the pack once again is LyondellBasell CEO Bob

Patel, who is guiding the company towards its proposed merger with Brazil's Braskem, as well as taking a lead on plastic waste. We feature lots of new entrants as well as familiar faces plus the "Ones to Watch" section, industry leaders in new positions with plenty to do in 2019.

Patel pursues evolution, growth

LyondellBasell CEO Bob Patel repeats as the ICIS Top Power Player as he drives the company's next phase of growth and takes a lead on plastics waste on a global scale

AL GREENWOOD HOUSTON

This year's top power player, Bob Patel, has overseen an evolution at LyondellBasell, focusing on expansion after his predecessor engineered a remarkable turnaround.

Jim Gallogly became LyondellBasell's CEO while it was still operating under bankruptcy protection.

At the time, the company called for a strategy built around operational safety and reliability, cost cutting, promoting a new sense of purpose and culture, and putting together a cost-effective growth plan.

During the advent of US shale gas, LyondellBasell debottlenecked existing crackers instead of building new ones like its peers. The strategy was a quick, cost-effective way to expand capacity and take advantage of the flood of cheap feedstock.

Patel was announced as Gallogly's successor at the end of 2014, marking a new phase for the company's evolution. If Gallogly pursued consolidation and recovery, Patel would pursue evolution and growth.

Under Patel's tenure, the company decided to go ahead with building a new propylene oxide/tertiary butyl alcohol (PO/TBA) project in Channelview, Texas. At \$2.4bn it is the largest such investment in company history. The project, which will feature 470,000 tonnes/year of PO and 1m tonnes/year of TBA, is scheduled to start up in 2021.

That followed an earlier decision to build a new 500,000 tonne/year high density polyethylene (HDPE) plant in La Porte, Texas, that will be the first to feature the company's new Hyperzone technology. The project is slated to start up in mid-2019.

The company's growth spurt encompassed more than just organic growth.

COMPOUNDING DEAL

Earlier in 2018, LyondellBasell completed its \$2.25bn acquisition of US-based compounder A. Schulman.

LyondellBasell already had a compound-

1 CEO LYONDELLBASELL BOB PATEL



ing business prior to the deal, but it was limited to polypropylene (PP), focused mostly on the automobile industry.

Schulman complements this existing compounding business by adding more products that LyondellBasell could sell to its existing automobile customers while also providing new end markets for its existing PP compounding business.

Schulman also provides LyondellBasell with an additional outlet for its PE. In addition to selling virgin PE to existing customers, LyondellBasell now has the option of consuming the resin internally through its newly acquired compounding assets. The result expands the potential market reach of the company's polyolefins.

BRASKEM GAME CHANGER

An even bigger potential acquisition is under negotiation. LyondellBasell is in talks to acquire Braskem, the largest polyolefins producer in Latin America. Braskem is the sole producer of PP and PE in Brazil. Its 75% owned joint venture in Mexico, Braskem

Ideasa, makes it the largest of that nation's two PE producers. Plus, Braskem is a major PP producer in the US and Europe, and is the only firm building a new PP plant in the US.

If the deal goes through, it would create the world's largest polyolefins producer. Talks are still ongoing between LyondellBasell and Odebrecht, a Brazilian construction company that owns a majority of the voting shares of Braskem. The other major shareholder is Brazil's state-owned oil and gas company, Petrobras.

The acquisitions and expansions do not represent a break from LyondellBasell's past as much as an extension of its existing role as a commodity chemical producer.

The two new projects LyondellBasell is building will produce materials already made by the company.

The acquisition of Schulman did not represent a move towards specialty chemicals, since compounding is not such a business.

The commitment to reliability continues under Patel, who still carries out Gallogly's practice of discussing the company's safety performance towards the start of quarterly earnings conference calls.

PLASTIC WASTE INITIATIVE

The company's latest endeavor expands this commitment to well-being to a larger scale. LyondellBasell is among a group of chemical companies developing an initiative to address plastic waste.

The company itself started up a 50/50 joint venture with waste management firm SUEZ for plastics recycling. The joint venture, called Quality Circular Polymers (QCP), mechanically converts consumer waste into 25,000 tonnes of PP and HDPE.

Earlier this year, these achievements led Patel to receive the ICIS Kavalier award, which was voted for by Patel's peers, the senior executives comprising the ICIS Top Power Players. He ends the year at the top of this year's group. ■

2 CHAIRMAN INEOS JIM RATCLIFFE



Ratcliffe celebrated the 20th anniversary of the company he founded in 1998 in Belgium, now a \$60bn enterprise. INEOS has performed strongly during the current petrochemicals upturn, maximising the cash-generating capabilities of its manufacturing asset base and its access to cheap ethane feedstock from the US.

The company is ploughing money back into petrochemical asset expansions and is planning a new ethane cracker and a propane dehydrogenation (PDH) plant in Europe. There are plans for a large ethylene oxide and derivatives “campus” in the US which could be on stream in 2022.

Ratcliffe is pushing INEOS well beyond petrochemicals, however. In November 2018, INEOS Enterprise agreed to buy the entire composites business of Ashland Global Holding for \$1.1bn. INEOS Automotive plans to

build a new 4x4, which Ratcliffe would like to be “an uncompromising off-roader”.

Currently, the company is thwarted in its shale exploration ambitions in the UK, but it is moving ahead quickly in the North Sea seeking to acquire additional oil assets. In less than two years, it has become a top 10 player in the North Sea.

It is reportedly in talks to acquire Conoco-Phillips’ UK North Sea assets, including the US company’s stake in the Clair field, which lies west of Shetland and has an estimated value of \$2.3bn.

Having met British Olympic yachtsman Ben Ainslie in a pub in 2018, Ratcliffe agreed that INEOS would fully fund Britain’s Americas Cup team to the tune of £110m. The first of the 36th America’s Cup races, in which INEOS TEAM UK will compete, is to be held in Cagliari, Sardinia, in October 2019. ■

3 PRESIDENT & CEO SAUDI ARAMCO AMIN NASSER



Nasser has led Saudi Arabia’s energy major through a busy year of repositioning and investment, as the government seeks to derive more value from its oil reserves while still planning an initial public offering (IPO) of 5% of the company.

Aramco has chemical investments in Saudi Arabia, where it is progressing an oil-to-chemicals complex with SABIC and a petrochemical complex with France’s Total, as well as in China, with Zhejiang Petrochemical, Malaysia, with Petronas, and in India, with partners including ADNOC and local producers. It also has plans to add US chemical capacity at its Motiva subsidiary.

Nasser is also overseeing Aramco’s huge investment in natural gas and unconventional gas, with an investment of \$150bn over the next 10 years, to establish an integrated international gas business.

At the same time, he is looking to invest in refining, lubricants and petrochemicals to achieve a better balance between upstream and downstream. Some \$100bn is earmarked for chemicals over the next 10 years.

To add to Nasser’s workload, Aramco is involved in a bid to take a stake in SABIC, as part of its drive to be able to convert 2m-3m bbl/day of oil into petrochemicals.

Nasser is also engaged in advancing Aramco’s innovation and technology strategy and in leading its efforts to produce cleaner energy and products through investments in entrepreneurial start-ups, renewables, oil-to-chemicals and carbon capture and storage.

The Saudi government is probably pushing for an Aramco initial IPO in 2021, once an acquisition from Saudi Arabia’s Public Investment Fund is complete and SABIC’s performance is reflected in its own results. ■

4 CEO BASF MARTIN BRUDERMUELLER



Brudermueller takes his place as chief of the world’s largest chemical company at a time of volatility and transition. The Germany-based company has held firm in the face of investor pressure to pursue a mega deal on the level of US-based Dow’s merger with DuPont, but has made radical moves to shift its position in the marketplace.

BASF is betting big on the agricultural chemicals market with the €7.6bn acquisition of the remedy assets divested by Bayer in the Monsanto merger, and shifting focus away from oil and gas by folding its Wintershall operations into a joint venture with DEA.

The moves have been controversial with some investors, amid rumblings that the company’s share price suffers from a “conglomerate discount” at a time when many chemicals firms are moving to simplify their operations.

But Brudermueller remains loyal to the

company’s core verbund philosophy, capitalising on the strength of its position in China to sign a proposed deal to build a \$10bn cracker project in Guangdong that would be 100% owned by BASF.

On the circular economy front, BASF has started to produce materials from chemically recycled plastic waste products and syngas for the first time using a thermochemical process through its new ChemCycling venture.

The waste-derived oils are produced by partner Recenso. The first batch of oil was fed into a Ludwigshafen cracker in October, with ethylene and propylene the primary outputs.

BASF has been hit more recently by weak automotive demand in Europe and China, and logistical issues along the Rhine. As a bellwether for the fortunes of chemicals, Brudermueller will be tasked with navigating BASF through continuing choppy waters. ■

5 **CEO BOROUGE** **AHMED OMAR ABDULLA**



Borouge CEO Ahmed Abdulla continues to oversee the rapid expansion of the Borealis/ADNOC joint venture in Abu Dhabi, which will more than double polymers production by 2025 and add liquids cracking to the UAE's slate for the first time. At the same time he is building up Borouge's innovation capability in the region and taking an aggressive stance on sustainability and plastics recycling. The Borouge 4 expansion, with mixed

liquids and gas crackers to add value, is now in the pre-FEED study and design stage. Borouge is also adding new polypropylene capacity, with a fifth unit of 480,000 tonnes/year that will be integrated into its Borouge 3 operations.

7 **VICE CHAIRMAN & CEO SABIC** **YOUSSEF AL-BENYAN**



SABIC's Al-Benyan continued the company's strategy in 2017 of focusing on new production ventures, expanding existing facilities and growing its global networks. In March, SABIC signed the first engineering and design contract on its oil-to-chemicals complex being developed in Saudi Arabia with Saudi Aramco, and in May it signed with ExxonMobil Chemical to build a new cracker and downstream units in the US. In China, SABIC has this year

agreed a memorandum of understanding for further large-scale petrochemicals investment in Fujian. He has also progressed the transformation of the company by putting all its agrochemical activities in a single holding entity with a view to selling them to SAFCO.

9 **CHAIRMAN & CEO WANHUA CHEMICAL** **LIAO ZENGTAI**



Having spent his entire career at Wanhua Chemical since 1983, Liao is now leading plans to build a 1m tonne/year cracker in Yantai, China, by 2020 as part of an integrated strategy to drive growth and profitability. The plant will include downstream polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC) and other production units. The project is part of Wanhua's "Eco-Chain" integration strategy to put industrial production

processes in a closed loop. Specifically, it aims to use ethylene from the cracker and HCl byproduct from its isocyanates production to produce PVC. The company is expanding capacity in China, and in the US through a new greenfield project.

6 **CEO DOWDUPONT** **EDWARD BREEN**



Lleading the mega merger between two major global chemical giants, Breen achieved over \$1.3bn in cost synergies through the third quarter of 2018 and is now engineering the split of the company into three separate publicly traded companies – Dow, DuPont and Corvea. The reorganisation of the DowDuPont businesses into these distinct entities has been a complex challenge, and the separations are set to take place through 2019.

Breen will be executive chairman of the "new" DuPont, which is expected to emerge by 1 June 2019. Breen has emphasised R&D as key to the new DuPont's success, committing to spending 4-5% of sales or around \$900m annually, even through a recession.

8 **CEO SIBUR** **DMITRY KONOV**



Konov has safely steered the Russian petrochemical major through another year of growth while construction continues on the giant ZapSibNeftekhim site. The \$9.5bn complex is due for mechanical completion in the fourth quarter of 2019, with production expected to begin in 2020. ZapSibNeftekhim is expected to double Russia's polymers capacity when it comes on stream, with around half of the projected total combined 2m

tonnes/year polyethylene and polypropylene output targeted at the domestic market and neighbouring CIS countries. The CEO – together with other shareholders – is also thought to be having another try for an initial public offering.

10 **HEAD OF PETROCHEMICALS RELIANCE** **NIKHIL MESWANI**



Reliance Industries Limited (RIL) was among the first companies to arrange imports of ethane from the US. This year, the company's Nagothane unit began cracking ethane, joining the company's Hazira and Dahej crackers. Reliance has also started up plants producing low density polyethylene (LDPE), metallocene linear low density PE (MLLDPE) and monethylene glycol plants in Jamnagar. The new PE plants and sources of advantaged

ethane have helped turn India into a PE exporter. Reliance may choose to keep those pellets at home, given expectations that India's economy will grow by more than 7% in 2018 and 2019. It is the fastest among the world's major economies.

11 CHAIRMAN & CEO ARKEMA THIERRY LE HENAFF



Le Henaff continues the company's stellar growth trajectory, achieving significant sales and profit growth so far through 2018. The CEO has led the firm since its inception and has successfully transformed it from a mixed bag of commodities and specialties into one focused on advanced materials. In November, Moody's upgraded Arkema's credit rating outlook from stable to positive on the back of deleveraging since it bought adhesives

firm Bostik in 2015 and an improved product portfolio. The CEO continues to make bolt-on acquisitions which will help Arkema achieve its goal to become a €10bn sales company with a close to 17% operating margin by 2020.

12 CEO COVESTRO MARKUS STEILEMANN



Steilemann – previously Covestro's chief commercial officer – had a hard act to follow when he took over from the highly successful Patrick Thomas on 1 June. Thomas retired just as global isocyanates markets were about to normalise after a period of tightness which had driven stellar prices and margins for Covestro and its peers. In October, Covestro announced it will invest around €1.5bn to build a new world-scale methyl di-p-phenylene isocyanate (MDI) plant in Baytown, Texas, with start-up scheduled for 2024. Steilemann told ICIS the move followed a long-term strategy of having production within its main regional markets of Asia, Europe and Americas.

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13 EXECUTIVE VICE PRESIDENT SHELL CHEMICALS GRAHAM VAN'T HOFF



Van't Hoff continues to oversee significant growth at Shell with expansions in the US and China. Shell is making progress on its Pennsylvania Petrochemicals Complex in Monaca, Pennsylvania, US. The cracker and polyethylene units will use local ethane to feed the large plastics processing base in the northeast US. Shell's Tiger AO4 project is due on stream at the end of 2018. It adds 420,000 tonnes/year of capacity to what is already the

largest alpha olefins production facility in the US. In China, Shell is looking to further develop the Nanhai site in Huizhou, Guangdong, with partner CNOOC. The site's new 1.2m tonne/year cracker started up earlier this year.

14 CEO LANXESS MATTHIAS ZACHERT



With the sale of its 50% stake in the ARLANXEO synthetic rubber joint venture to partner Saudi Aramco for €1.4bn, Germany-based LANXESS under Zachert has largely transformed into a pure play specialty chemicals company. The CEO successfully integrated the €2.4bn acquisition of US-based Chemtura, creating a force in lubricant and polymers additives. In July, Zachert announced a plan to invest €500m in North

America through 2022 to upgrade sites and expand capacity in lubricant additives, flame retardants, urethanes and polyamide. In Germany, the company is increasing capacity for fibre-reinforced thermoplastic composites and engineering plastics.

15 PRESIDENT & CEO WESTLAKE CHEMICAL ALBERT CHAO



The CEO of the US-based olefins and vinyls producer has successfully integrated its \$3.8bn buy-out of Axiall, having achieved \$275m in cost synergies through the third quarter of 2018. Chao was extremely persistent and patient in his approach to buy chlor-alkali and polyvinyl chloride (PVC) producer Axiall, having been turned away from the company multiple times, including back in 2012 when it was named Georgia Gulf. The deal was

finally completed in June 2016, after which the vinyls cycle turned up. The acquisition also brought joint venture ownership of the cracker being built in Lake Charles, Louisiana, which will bolster Westlake's back integration for polyethylene (PE).

16 CEO AKZONOBEL THIERRY VANLANCKER



Vanlancker leads a much more streamlined AkzoNobel following the company's €10.1bn sale of its specialty chemicals business in October. Focused on remaining independent following a hostile takeover approach by US-based PPG, Netherlands-based AkzoNobel managed to quell shareholder pressure by selling off its specialty chemicals business and pledging to return the vast majority of proceeds to its investors. Vanlancker plans to

continue expanding AkzoNobel's core coatings franchise organically and through acquisitions. In December, the company acquired Swire Industrial's minority interest in their decorative paints joint venture in China, taking full ownership.

17 **CEO BRENNTAG** **STEVE HOLLAND**



Under Holland's leadership, the world's largest distributor continues to grow steadily through organic and inorganic expansion. The CEO aims to spend around €200m-300m/year on bolt-on acquisitions. In September the company agreed to acquire Desbro Group in Kenya, Tanzania, Uganda and the United Arab Emirates. The same month, it closed a deal to buy the chemicals distribution business of Canada

Colors and Chemicals, a full-line group focused on customer industries such as life sciences, water treatment, coatings, construction and energy and mining. In August it completed the acquisition of specialty chemicals distributor Alphamin, headquartered in Belgium.

18 **CHAIRMAN SINOPEC GROUP** **DAI HOULIANG**



Dai is steering China's flagship chemical company through a new period of challenges ranging from the US-China trade war and slowing domestic growth. However, he is certainly not shying away from growth. In late October, Dai met his BASF counterpart Bruder-muller in Beijing to sign a memorandum of understanding (MoU) to expand their BASF-YPC joint venture through the construction of a new 1.0m tonne/year cracker and

downstream units. "With the strengthened cooperation between Sinopec and BASF, we will provide high-quality chemicals... We aim to create further value by extending this partnership," said Dai at the signing event in Beijing.

19 **PRESIDENT EXXONMOBIL CHEMICAL** **JOHN VERITY**



John Verity began leading Exxon-Mobil Chemical as president in January 2018. The company's "Growing the Gulf" initiative includes investing \$20bn over 10 years to build and expand 11 projects in US. Following the late-2017 start-up of its Mont Belvieu polyethylene (PE) plant in Texas, Exxon-Mobil in the summer started up its Baytown ethane cracker. In May, it created a joint venture with SABIC for the development of a 1.8m

tonne/year cracker in Texas. ExxonMobil is mulling a polypropylene (PP) expansion, and new copolymer and LAO plants in the US Gulf coast, as well as new cracker and polyolefins plants in Guangdong, China.

20 **CEO ADNOC** **AHMED AL JABER**



The head of the Abu Dhabi National Oil Company (ADNOC) has unveiled an ambitious \$45bn investment plan in petrochemicals, with an aim to triple capacity to 14.4m tonnes/year. It will build a new mixed feed cracker in Abu Dhabi and add new downstream chains in construction chemicals, oil and gas chemicals, surfactants and detergents to "stretch the value from the barrel of oil". It is also partnering with Saudi Aramco to build a

\$44bn refining and petrochemical complex in India (Ratnagiri) with a consortium of Indian oil companies. Al Jaber has made a slew of partnerships with other players such as Cepsa, Mubadala, Total, Eni and Ravago.

21 **PRESIDENT & CEO UNIVAR** **DAVID JUKES**



The head of the world's second largest chemical distribution company has been off to a fast start from May 2018, as Univar in September announced the \$2bn acquisition of US-based Nexeo Solutions to become "the premier global distributor of chemicals and ingredients". The deal is expected to be completed in H1 2019 and combined sales would be around \$12.5bn, of which \$2.0bn is in the plastics distribution unit set for divestiture. Jukes aims to achieve cost synergies of \$100m by the end of the third year of completion. In the meantime, Univar continues to sign new distribution deals – the latest with Buckman, Braskem, Castrol and Colonial Chemical.

22 **CEO MEXICHEM** **DANIEL MARTINEZ-VALLE**



Since becoming CEO of Mexichem in February 2018, Daniel Martinez-Valle has headed a company that has evolved beyond PVC. The company completed its \$1.9bn acquisition of an 80% stake in Netafim, an Israeli company that makes equipment used in drip agriculture. The deal complements Mexichem's Fluent business, which produces pipe. The company has made several acquisitions to add capabilities to its existing vinyls business.

Mexichem's decision to develop a US ethane cracker with OxyChem has proven prescient. Not only did the cracker provide Mexichem with feedstock-advantaged VCM, it also insulated the company from the ethane shortage in Mexico.

23 **CEO BOREALIS** **ALFRED STERN**



Alfred Stern takes over Borealis at a moment in which polymers sales continue thriving – boosted in part by the company's large-scale Borouge joint venture in Abu Dhabi. Stern has conceded that a major polymers producer with fertilizers operations may not be understood by the investment community. But Borealis' privately owned nature allows for those perks. The new CEO, an old name at Borealis, has said that the fertilizers division's carve-out in 2018 is not a step towards a divestment, but rather the first step to make it more efficient. Stern will apply a steady method to navigate the potential overcapacity and lower prices that haunt the global polymers markets.

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25 **PRESIDENT & CEO NOVA CHEMICALS** **TODD KARRAN**



Karran has been president and CEO at NOVA Chemicals for more than three years. Under Karran, the company announced a new ethane cracker in the US Gulf coast via a joint venture (JV) with Borealis and Total. The JV broke ground on the \$1.7bn ethane cracker in Port Arthur, Texas, in June. NOVA also made a \$2m investment in Project STOP to prevent marine debris. Several projects in Ontario, Canada, are progressing. The company is expanding its Corunna cracker in Ontario by approximately 50% and its new advanced SCLAIRTECH technology linear low density polyethylene (LLDPE) facility is on schedule for start-up in late 2021.

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27 **PRESIDENT & CEO CELANESE** **MARK ROHR**



Rohr has overseen a surge in profitability in 2018, driven by favourable acetyls chain dynamics and continued growth in its engineering materials division with new projects and bolt-on acquisitions. In October, it announced a definitive agreement to acquire India-based Next Polymers Ltd, one of the country's largest engineering thermoplastics (ETP) compounders with around 20,000 tonnes/year of capacity. The US-based company is

also finishing up its 150,000 tonne/year VAM expansion at Clear Lake, Texas. It is also debottlenecking its polyacetal (POM) plant in Frankfurt, Germany, expanding capacity by 20,000 tonnes/year by 2020 to make it the world's largest POM plant.

24 **CEO VERSALIS** **DANIELE FERRARI**



Long gone are the times when Italy's energy major Eni was trying to sell its petrochemicals division. Employee opposition, in a state-operated company where politics count more than economics, made the move impossible. Versalis decided to try to reinvent itself as a green chemicals producer – admittedly the transition is taking time. Ferrari tells the story of how the circular economy is unavoidable and how greener and more efficient

plastics are needed to reduce plastic waste. "The circular economy model should be considered as a natural and necessary evolution. As chemical producers, we must be at the forefront of this challenge," Ferrari told ICIS in November.

26 **CHAIRMAN, PRESIDENT & CEO HUNTSMAN** **PETER HUNTSMAN**



The head of the US-based polyurethanes, intermediates and specialty chemicals company undertook a successful IPO of its titanium dioxide (TiO₂) and other pigments business Venator in 2017 and continues to actively market its remaining 53% stake in the company. Huntsman has significantly deleveraged the company, taking debt/EBITDA down from 3.8x in 2015, to just 1.3x by the end of the third quarter of 2018. In April 2018,

Huntsman acquired spray foam producer Demilec for \$350m, providing it with a higher margin outlet for its polymeric MDI. It also is building a 70,000 tonne/year polyurethane systems unit in Tianjin, China, set to start up in early 2019.

28 **CHAIRMAN HELM** **HANS-CHRISTIAN SIEVERS**



The diversified Germany-based group is a growing global force in bulk commodities where it partners with producers to handle sales and marketing operations. Sievers is driving growth in glycols, propylene and methanol. In 2018 new US methanol capacity started up by Natgasoline in Beamont, Texas, added 1.8m tonnes/year to Helm's potential output. It is also growing in ethylene glycols, where it has a contract with Sasol at Lake Charles,

Louisiana, to market its entire 250,000 tonne/year EG production once the new cracker starts up. Helm will also grow in propylene after signing a deal with Russia's Rosneft to market its entire propylene production from German refineries.

29 PRESIDENT & CEO CHEMOURS MARK VERGNANO



The head of the US-based titanium dioxide (TiO₂), refrigerants and specialty chemicals company formerly part of DuPont is pioneering a price stability mechanism for TiO₂ for customers to provide flexibility of volumes at more stable pricing. Vergnano aims to have the majority of its TiO₂ contracts under “value stabilisation” through 2019. He is also overseeing strong growth in next-generation Opteon HFO refrigerants, which have significantly

lower global warming potential (GWP). Chemours’ \$300m Opteon project in Corpus Christi, Texas, US, was on track to be completed by the end of 2018. Opteon sales have been growing at a 20% clip through the third quarter.

30 PRESIDENT & CEO LOTTE CHEMICAL KIM GYO-HYUN



Lotte Chemical under Kim has lined up major projects to strengthen its Asian presence, while setting its sights further to the US. Parent company Lotte Group has earmarked Korean won (W) 12 trillion (\$10.6bn) in investments in 2019, including in the chemical sector of South Korea, Indonesia and the US. The company is ending 2018 by building its \$3.5bn petrochemical project in Indonesia, four months since its new polypropylene

plant in Malaysia started commercial operations. In the US, Lotte Chemical is building a 1.0m tonne/year ethane cracker with joint venture partner Westlake Chemical in Lake Charles, Louisiana, for start-up in the first half of 2019.

31 PRESIDENT, REFINING & CHEMICALS TOTAL BERNARD PINATEL



Since taking the top position at Total’s refining and chemicals division in 2016, the former Bostik CEO has been part of the wider move for oil and gas majors to take bolder steps into the chemicals sector, helping to broker a \$9bn petrochemicals joint venture with Saudi Aramco in Al Jubail, Saudi Arabia. The two companies are to invest \$5bn in the project, with the remainder to be raised from third parties. Engineering contracts for

the mega complex were signed in October, bringing the project closer to its projected 2024 launch date, where it is expected to operate downstream of the SATORP refinery operated by the two companies.

32 CEO BRASKEM FERNANDO MUSA



Musa, previously the head of Braskem’s US subsidiary, heads a company that is increasingly global, with operations in the US, Europe and now Mexico through the 75% owned Braskem Idesa joint venture. This increasingly international presence proved critical during Brazil’s deep recession earlier this decade. Global markets provided Braskem with an outlet for its domestic polyolefins and vinyls production, while its foreign operations

provided the company with additional income. Braskem’s ties to global markets became more pronounced when the company’s Camacari cracker began accepting shipments of ethane from the US.

33 JOINT PRESIDENT AND CEO SASOL BONGANI NQWABABA



Nqwababa took up his position on 1 July 2016, having previously served as chief financial officer. In December the LLDPE unit of its Lake Charles Chemicals Project (LCCP) in the US was mechanically complete, with mechanical completion of the cracker being imminent. The overall project had reached 91% completion and takes advantage of US ethane and includes a 1.5m tonne/year ethane cracker, and downstream units of 470,000

tonnes/year of LLDPE, 420,000 tonnes/year of LDPE and 300,000 tonnes/year of ethylene oxide. Late in 2017 Nqwababa said the company would be reluctant to invest in further new greenfield chemicals capacity without a co-investor.

34 CHAIRMAN ZHEJIANG PETROCHEMICAL LI SHUIRONG



As chairman of Zhejiang Petrochemical Corporation, Li headed the company in speeding up construction of the first phase of its signature refining and petrochemical project to catch up to a scheduled commissioning in the first quarter of 2019. Li is also chairman of Rongsheng Petrochemical, parent of ZPC with a majority 51% stake. The first phase of ZPC will have 400,000 bbl/day of refining, 5.2m tonnes/year of aromatics and 1.4m

tonnes/year of ethylene capacities, one of the largest plants of its kind in China. In November, Saudi Aramco signed a preliminary agreement on acquiring a stake in the project. Aramco has also agreed to supply 170,000 bbl/day of crude to the refinery.

35 PRESIDENT & CEO TRINSEO CHRIS PAPPAS



The head of the plastics, synthetic rubber and latex binders producer is navigating the company through difficult business conditions. In response to weak tyre demand, Pappas is adopting aggressive cost reduction and lowering exposure to commodity rubbers while focusing on advanced S-SBR technology. On the growth side, Pappas expects the July 2017 acquisition of Italy-based API to yield opportunities as it brought Trinseo

into thermoplastic elastomers (TPE) or soft-touch polymers. Trinseo had specialised in rigid polymers such as acrylonitrile butadiene styrene (ABS), polycarbonate (PC), polystyrene (PS) and styrene acrylonitrile (SAN).

37 CEO CHEVRON PHILLIPS CHEMICAL MARK LASHIER



Late in 2017 Chevron Phillips Chemical Company started up two polyethylene (PE) units in Old Ocean, Texas, later followed in 2018 by a new ethane cracker at its Cedar Bayou facility in Baytown, Texas. CP Chem CEO Mark Lashier said the company was entering "a new era of growth" with the start-ups, part of its US Gulf Coast Petrochemicals Project. The ethane cracker can produce up to 1.5m tonnes/year of ethylene, which is

used to feed the PE units. Lashier said the low-cost feedstocks in the US were what helped bring the company's US Gulf Coast Petrochemicals Project to fruition. The company is considering another US cracker project.

39 CEO INDORAMA VENTURES ALOKE LOHIA



Indorama Ventures under Lohia has embarked on a string of acquisitions in 2018 to expand the company's global footprint, the latest of which are German airbag yarns producer UTT, Egypt's polyethylene terephthalate (PET) converter Medco Plast and polyester staple fibre (PSF) maker M&G Fibras Brasil. One of the most important deals in the PET market involved Indorama teaming up with Alpek and Far Eastern New Century

to buy bankrupt M&G's unfinished PTA/PET project in Corpus Christi, Texas, for \$1.125bn. The company is also in the late stages of restarting an idled US cracker in Lake Charles, Louisiana, which will provide ethylene feedstock for its operations.

36 PRESIDENT & CEO METHANEX JOHN FLOREN



Floren joined Methanex in 2000 and assumed the role as president and CEO in 2013. Methanex boasts being the world's largest methanol producer and supplier, achieving record production and sales volume in 2017. The company is considering a new US methanol plant, Geismar 3 in Louisiana, with a final investment decision expected by mid-2019. In October, Methanex announced the restart of its Chile IV plant, which had been

idled since 2007. It plans to invest \$50m over the next few years to refurbish its Chile 1 plant. Methanex's subsidiary, Waterfront Shipping (WFS), announced in 2018 an investment in another four dual-fuel vessels capable of running on methanol.

38 CEO ASCEND PERFORMANCE MATERIALS PHIL MCDIVITT



The head of the US-based integrated polyamides producer in August announced the acquisition of Netherlands-based engineering plastics compounder Britannia Techno Polymers (BTP), establishing the company's first manufacturing operations abroad. The move brings Ascend closer to existing customers in Europe. The compounder of multiple plastics gives Ascend product development capability in Europe and is a natural extension of

its fully integrated nylon 6,6 chain. And the CEO continues to expand polyamides capacity across the chain in the US, including in key intermediates acrylonitrile (ACN), hexamethylene diamine (HMDA) and adiponitrile (ADN).

40 CEO PETRONAS CHEMICALS GROUP SAZALI HAMZAH



PETRONAS Chemicals under Sazali is scheduled to commission its Refinery & Petrochemical Integrated Development (RAPID) project in Johor, Malaysia, in early 2019. The site's polymer capacities include 350,000 tonnes/year of linear low density polyethylene (LLDPE), 900,000 tonnes/year of polypropylene (PP), and 400,000 tonnes/year of high density polyethylene (HDPE). PETRONAS plans to start up the refinery and cracker in

the first half of 2019 and downstream petrochemicals in the second half. Early in 2018, it finalised the deal to bring in energy giant Saudi Aramco as a strategic partner. Aramco is expected to provide up to 70% of the crude feedstock.

ONES TO WATCH

These new chemical company CEOs will seek the right formula for growth at their companies. Three separate companies will emerge in 2019 from the DowDuPont merger

CEO-ELECT DOW CHEMICAL

JIM FITTERLING



The head of the “new” Dow, which is set to be spun off by 1 April 2019, will take a dramatically different strategy in its approach to capital spending. Compared to the old Dow from 2014-2016 where annual capital expenditures (capex) was around \$4bn, Fitterling will take a disciplined approach, with annual capex at around \$2.8bn. He will also use Dow’s catalyst and process development expertise to help promote plastics recycling and reduce waste.

CEO-ELECT CORTEVA

JIM COLLINS



The head of the agriculture segment to be spun off from DowDuPont by 1 June 2019 will lead a US-based agricultural chemicals and seed traits company with around \$14bn in annual sales and over 140 R&D facilities worldwide. Corteva’s strategy will be to “provide farmers with the right mix of seeds, crop protection and digital solutions to maximise their yields and improve their profitability”. Corteva will get its start as the number-two seed company in the world.

CEO-ELECT DUPONT

MARC DOYLE



The leader of the specialty chemicals business to be spun off from DowDuPont by 1 June 2019 will have a “relentless” focus on productivity and drive sales growth through innovation. The “new” DuPont will have four segments – nutrition & bioscience, electronics & imaging, safety & construction, and transportation & advanced polymers, and Doyle tags key drivers as connectivity, mobility, healthy living, worker safety and sustainable development. The new DuPont has heritage businesses from DuPont, Dow, Dow Corning and FMC.

CEO NOURYON

CHARLES SHAVER



In October 2018 the former AkzoNobel specialty chemicals business became Nouryon following its acquisition by The Carlyle Group and GIC. “Launching our new company is a significant milestone to add to our proud history and we are all looking forward to this exciting new chapter,” said Shaver at the time. He faces the challenge of growing the company’s polymer chemistry, ethylene and sulphur derivatives, surfactants and

chlorine chain businesses in the face of lacklustre European demand growth.

CEO-ELECT SOLVAY

ILHAM KADRI



Kadri – a French and Moroccan national – will take over as CEO of the Belgian major from 1 March 2019 from longtime CEO Jean-Pierre Clamadieu. She is CEO and president of US hygiene technology and services company Diversey and since 2013 has led its turnaround, carveout and divestment to a private equity fund. She brings to Solvay international experience, having worked for Shell-Basell, UCB-Cytec, Huntsman and

Dow Chemical across the United States, Europe, the Middle East and in Asia.

CEO CLARIANT

ERNESTO OCCHIELLO



Occhiello takes over from Hariolf Kottmann, who has become chairman of Clariant. Occhiello manages Saudi Arabia-based SABIC’s specialty chemicals business. SABIC took a 25% stake in Clariant following the latter’s unsuccessful \$20bn merger with US-based Huntsman, which was thwarted by an activist investor. Occhiello, who is Italian, joined SABIC in 2011 after working at Dow. He now has the job of merging Clariant with

the SABIC specialties group to create a high-performance specialties group targeting Swiss franc 3bn in turnover.