

Nouryon

We are a global specialty chemicals leader. Markets worldwide rely on our essential chemistry in the manufacture of everyday products such as paper, plastics, building materials, food, pharmaceuticals, and personal care items. Building on our nearly 400-year history, the dedication of our 10,000 employees, and our shared commitment to business growth, strong financial performance, safety, sustainability, and innovation, we have established a world-class business and built strong partnerships with our customers. We operate in over 80 countries around the world and our portfolio of industry-leading brands includes Eka, Dissolvine, Trigonox, and Berol.

nouryon.com



Polymer catalysts

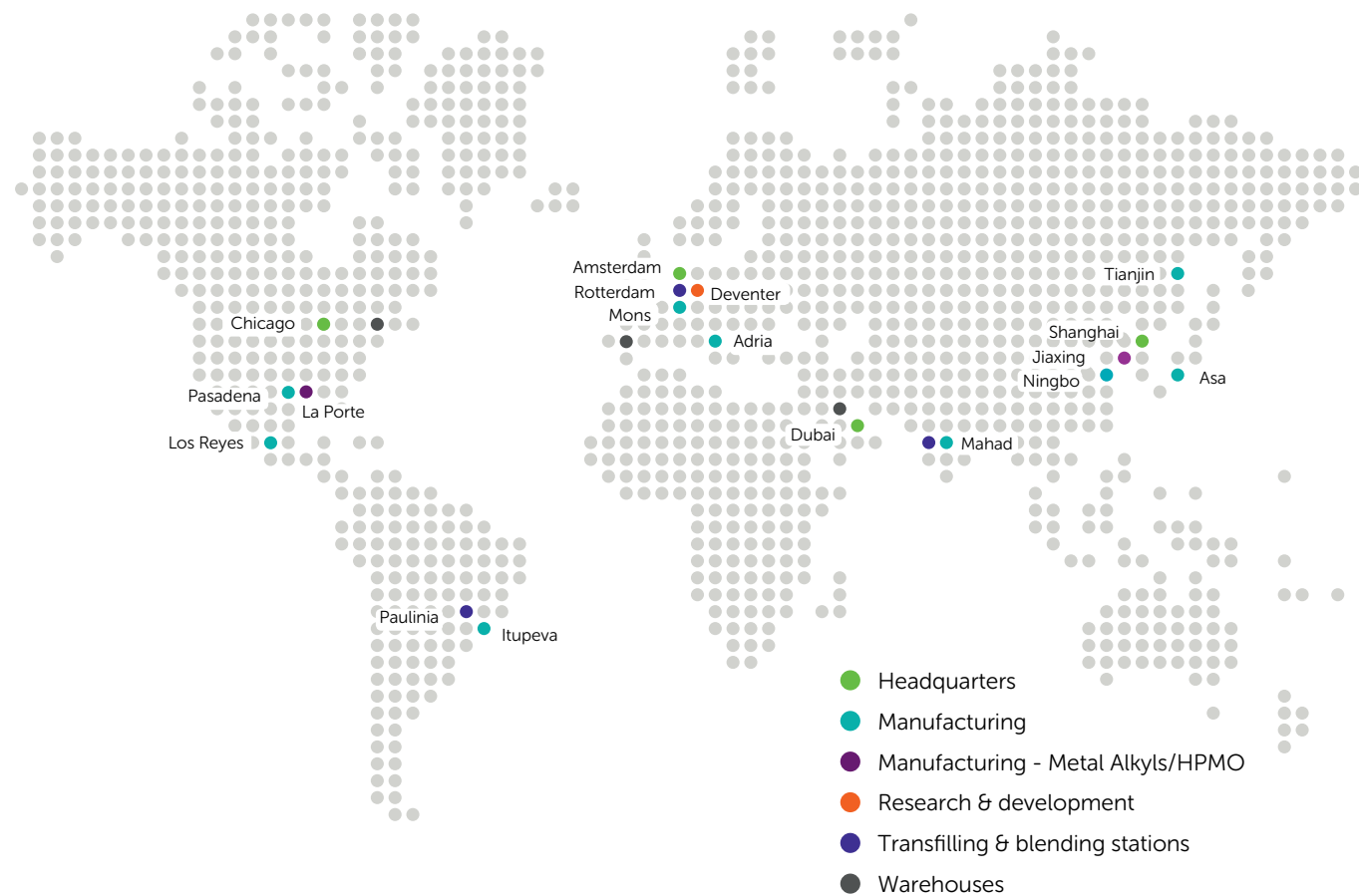
Investing in your future

Global specialty chemicals leader in supply reliability, innovation, safety, and sustainability

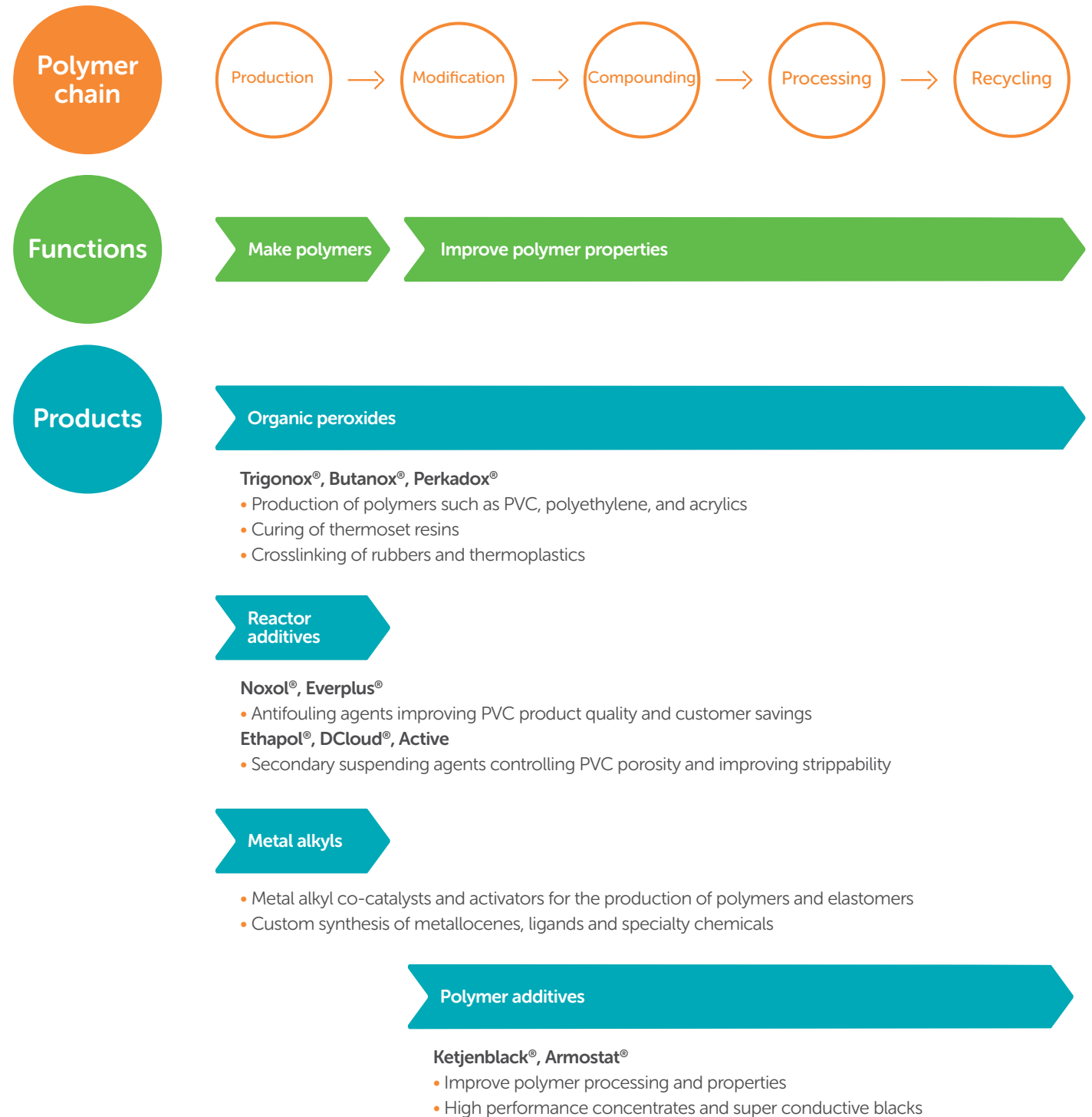
Nouryon

Our sites

Our talented team and global manufacturing and distribution network allow us to deliver our polymer products to our customers anywhere in the world, ensuring security of supply and access to quality products.



Supplying the entire polymer market



Expanding our global manufacturing footprint

Across the globe, in the last two years we have spent €180 million and we have committed more than €150 million to optimize our operational footprint, upgrade technologies, increase production volumes, and improve supply to better serve our customers and meet the growing needs of the marketplace. In 2018 we invested over €100 million and in 2019 more than €80 million to continue to expand capacity and work on sustainable product and process



Investments across the world:

Metal Alkyls North America

La Porte, Texas

- Continued sitewide investments to increase plant capacities
- Several capacity expansions across product lines, including HPMO, TEAL, TIBAL, TNOAL, TNHAL, BEM, TMAL and aluminoxanes

Europe Rotterdam, The Netherlands

- Expanding production capacity of TEAL to further generate growth, improve safety and environmental performance

Asia Jiaying, China

- Acquisition of Zhejiang Friend Chemical Co. (Friend), the largest producer of TEAL in China
- Expanding TEAL capacity to meet growing regional demand

Nouryon is the world's leading producer of organic peroxides, metal alkyls, polymer additives, and organometallic specialties for the thermoplastic, composite, and rubber industries.

Organic peroxides North America

Pasadena, Texas

- Site-wide improvement and debottlenecking program to increase capacity
- New world-class warehouse to accommodate cold peroxide storage
- Introduced the Butanox range, a dimethyl phthalate (DMP)-based methyl ethyl ketone peroxide (MEKP) portfolio for the curing of thermoset resins and coatings

South America Los Reyes, Mexico

- Introduced Perkadox GB-50 production, a phthalate-free formulation for composite applications in a new plant to meet the needs of our customers and to ensure the safety and sustainability of our products
- Significant capacity expansion for cold peroxides used in PVC and polyolefin production
- Introduced organic peroxides emulsions to the US, becoming the first producer to offer these formulations to the US PVC market

Itupeva, Brazil

- Acquired leading Brazilian organic peroxides maker, Polinox, to expand the global footprint and become a leading producer of curing systems in South America
- Investing in the site to consolidate production in one state-of-the-art facility

Europe Mons, Belgium

- Investing in process technology to increase the eco-efficiency profile of Trigonox B (DTBP)
- Technological and operational improvements to product quality and site capacity

Asia Ningbo, China

- Increased DCP capacity up to 38 thousand tons
- Increased Perkadox 14 capacity with 25 percent

Tianjin, China

- Construction of new €90 million state-of-the-art production site to support polymer industry growth in China
- Capability to produce Trigonox 187 for CiD

Asa, Japan

- Increased Trigonox 187 capacity

Mahad, India

- Increasing capacity by 80 percent to prepare for growing market demand in India and Middle East

Global

- Completed investment in crosslinking formulation production, in cooperation with our partner Ebbecke, Schoneck

Safety, sustainability, and innovation

Nouryon has proudly served the needs of the polymer industry for more than 60 years. Building on a tradition of close partnerships with customers, we are committed to excellence in the production and delivery of products and technologies to help meet the growing demands of the polymer industry. Nouryon remains committed to serving our customers locally with a focus on safety, sustainability, and innovation.



Safety

We are committed to sharing our expertise with our customers, distributors, and suppliers.

- Our company is recognized as a global leader in the safe production and use of organic peroxides and metal alkyls.
- We share our experiences and safety knowledge with all of our stakeholders.
- We offer onsite and online training on the safe handling of organic peroxides.

Sustainability

We continue to do more with less, reducing carbon emissions through a combination of improved energy efficiency, increased use of renewable energy, and higher use of bio-based raw materials in production. Downstream, we focus on expanding our portfolio of eco-premium products, which have a significant sustainability benefit over common alternatives.

- We are focused on reducing energy consumption, lowering CO₂ emissions, and reducing waste.
- Over 45 percent of our products provide customer sustainability benefits.
- We aim to generate 20 percent of our revenue from sustainable solutions by 2020.

Innovation

Nouryon is recognized around the world for its role in pioneering innovation within the polymer industry. We believe that breakthrough solutions require collaboration across the value chain, and we continue to forge resilient partnerships for sustainable innovation.

- Our **Continuous Initiator Dosing (CiD)** enhances PVC reactor output by 20-40 percent while reducing energy costs and lowering CO₂ emissions.
- **Trigonox 501** is our new product engineered for better performance in polypropylene.
- **Nouryact®**, our cobalt-free accelerator, provides a sustainable alternative to the recently reclassified cobalt-based accelerators. It also has functionality like easy production of biofiber-based composites.
- **Perkadox GB-50** is a DCHP-free go-to curing agent for road markings, flooring, elastomeric roof coatings, adhesives, chemical anchors, and other composites.
- We have introduced the first-ever **organic peroxide emulsions** to the US, a safer alternative to solvent-based peroxides for making PVC.

Work with us

Our success has been built on long-lasting and productive partnerships. We find that working collaboratively with a wide range of stakeholders, such as customers, partner companies, universities, and startups is helping us become more sustainable, more innovative, and deliver more value to our customers. We devote ourselves to understanding our partners' needs and working together in an open and honest way to develop solutions that help everyone grow. Our reliability and dedication to the polymer industry make us a company our partners can count on.



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