

# Press Release



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Increased efficiency through expansion of computing capacity

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Communications  
51365 Leverkusen

## Covestro fosters digital research and development

- **Digitalization of operative business continues to progress**
- **High-performance computing increases innovative strength**
- **Advantages in terms of sustainability and energy use**

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Digitalization is changing the chemical and plastics industries. Covestro actively seizes the opportunities and is driving digital technologies and processes in research and development (R&D) in its operative business with a comprehensive program. Investments in the expansion of the company's computing capacity are a central element. The powerful computing heart for digital research is located in Leverkusen and will be continuously expanded in the course of next year.

The planned hardware expansion will significantly increase computing power through high-performance computing and thus digitally support worldwide R&D activities. In addition, Covestro cooperates with competent partners such as RWTH Aachen University. This development is a further component of the digitization strategy, which comprises the three dimensions Digital Operations, Digital Customer Experience and Digital Business Models.

Covestro is working on the digital project with established companies from the IT sector. In the future, complex research and development processes can be significantly accelerated and test series can be computer simulated to a much greater extent. The time to market of innovative products can thus not only be shortened, but the processes also become more sustainable because energy and material consumption in experimental work is reduced.

"We are consistently going ahead with the expansion of high-performance computing. Thanks to digital research and development, we can contribute



faster and more efficiently to pushing the boundaries of what is feasible and preserving the earth's resources," says Markus Steilemann, CEO of Covestro.

### **More digital competence and education**

In addition to expanding its computing power, Covestro is also investing in promoting the digital skills of its employees. Under the leadership of Torsten Heinemann, Vice President Digital Research and Development, a team of international specialists is currently being formed. "We are strengthening our capabilities in the area of digital research and development in a very targeted manner, so that our young and dynamic division with its comprehensive expertise also covers the core fields of data science and computational chemistry," says Heinemann. In addition, Covestro promotes the education of young university graduates and advertises positions throughout Europe for master's, doctoral and post-doctoral programs.

### **Digitally supported research – tailor-made solutions**

Simulations for industrial catalysts are a good example of how "digital chemistry" can already improve product development today. Efficiency and sustainability are key objectives for catalysts. Computer chemistry can now be used to select catalysts more quickly, better understand response mechanisms and discover new response pathways. The combination of high-performance computing and many years of experience in classical laboratory chemistry guarantees shorter development times and optimized product results.

This enables Covestro to better meet the needs of its customers for tailor-made innovative solutions and to develop products with special properties in a targeted and efficient manner: The computer calculates the most promising solutions in extensive simulations.

In cooperation with the research partner RWTH Aachen University, the digitally obtained results are tested at the CAT Catalytic Center in real experiments in the laboratory. "In the future, it will be possible to virtually recreate numerous experiments that are very time-consuming and resource-intensive using conventional methods. All in all, the individual process steps are considerably reduced. The result is more environmentally friendly and energy-saving products and processes," says Prof. Walter Leitner, Scientific Director of the CAT Catalytic Center and Chair of Technical Chemistry and Petrol Chemistry at RWTH Aachen University.



### **Making research data globally comparable**

In the coming years, Covestro will also be investing increasingly in the consolidation of global research data in a company-wide knowledge network. The data platform will make the existing know-how available at all research locations worldwide and thus further increase the efficiency of R&D projects.

### **About RWTH Aachen University:**

RWTH Aachen University sees itself as an integrated interdisciplinary technical university and is the largest technical university in Germany. With its 260 institutes in nine faculties, it is one of the leading European science and research institutions and one of the state's universities of excellence. In the 2017/18 winter semester, around 45,000 students were enrolled in more than 150 degree programs, including around 9,000 international students from more than 120 countries. Training at RWTH Aachen University is above all application-oriented. The graduates are therefore in great demand in the business world as junior managers and executives. The CAT Catalytic Center is the joint Catalytic Center of RWTH Aachen University and Covestro. Research at the Department of Technical Chemistry and Petrol Chemistry is mainly concerned with organometallic catalysis, from its molecular basics to reaction concepts. The thematic focus is on the interface between energetic and chemical value creation.

### **About Covestro:**

With 2017 sales of EUR 14.1 billion, Covestro is among the world's largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 16,200 people (calculated as full-time equivalents) at the end of 2017.

*This press release is available for download from the Covestro press server at [www.covestro.com](http://www.covestro.com). Photos are available there for download as well. Please acknowledge the source of any pictures used.*

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