

Scopus®

CHEMICAL R&D

Case Study: Developing a Superior Technology Ahead of Competition

Access to Scopus is essential in chemical R&D to save time, reduce costs and get to market first



Summary

Improving product development processes in order to get to market first with a superior solution is vital to chemical R&D success. Discover how a Senior Technologist and R&D Manager at a major industrial gas company, saved an entire year of research in developing a new industrial production technology by using Scopus.



“A couple of hours of literature searching with Scopus saved us a year of research.”

—Ian Flamini, Senior Technologist and R&D Program Manager



Challenge: Staying Ahead of Competitors

Ian Flamini, a senior technologist and R&D manager at a chemical company*, led a team developing a new, large-scale industrial method of separating gases. The team’s task was to invent a novel ceramic membrane-based gas separation technology and design a compatible industrial process that would lower the cost of producing specific gases. Flamini’s team relied on Scopus throughout early-phase R&D and scale-up of its project.

“In our market, what differentiates one company from another is how efficiently you can make molecules. It’s all about the production technology, so staying abreast of the latest developments in our field helped us design the most economical materials and processes.”

Throughout the R&D process, saving time is vitally important to Flamini’s team. “One reason is simply the cost because time is money, especially when you’re building larger-scale equipment,” he explains. “There’s a constant risk that the market may find a different solution than the one you will offer, so you want to get to market before a competing solution gets there.”

“Making sure our technology remained ahead of the competitors throughout the R&D phase would also improve our chances of attracting government investment in our technology,” Flamini notes. “And if you are first to market with your technology, you can capture the confidence of the marketplace, so people will be more willing to invest in your technology versus an unproven one.”

Solution

1. Avoiding Reinventing the Wheel

While developing its novel gas separations technology, the team encountered a serious problem. The new membranes introduced a trace contaminant into gas streams during production trials. Rather than heading directly to the lab to resolve this problem, Flamini’s team went to Scopus first. “We found tons of papers had been published on the issue, and other researchers had found solutions that worked very well,” he recalls. “The knowledge we gleaned from Scopus gave us the option of buying an economical solution rather than spending time in the lab developing a solution ourselves.”

“Researchers are always excited about doing research but are sometimes less enthusiastic about performing the background search into the state of the art,” Flamini observes. “But from a manager’s perspective, a thorough search is really critical. Someone else may have already come up with a perfect solution to your problem. You can use their published insights to save a lot of money and time. You won’t need to reinvent the wheel.”

Flamini’s team benefited from the multidisciplinary coverage of Scopus, which increased its chances of finding the right solution in a single source. “This was a very interdisciplinary program; it wasn’t purely chemistry, it wasn’t purely engineering, it wasn’t purely material science, so we were crossing the boundaries all the time,” Flamini explains.

*For confidentiality purposes, names have been changed.

“By looking at the publications and presentations of our competitors’ personnel, we were able to infer in which directions their R&D was heading and which markets they were targeting.”

– Ian Flamini
Senior Technologist and R&D
Program Manager

Using Scopus to access patent literature was also important to Flamini. “We needed to identify the intellectual property in new areas we entered to avoid infringement,” he adds. “We didn’t want to waste time and money on developing a process that we ultimately couldn’t use because it would infringe a patent.” Scopus enabled him to access both published documents and patent literature from the same search results page.

2. Leveraging competitive insights

Scopus enabled Flamini’s team to monitor competing research projects. “Scopus was very useful for competitive intelligence,” he recalls. “By looking at the publications and presentations of our competitors’ personnel, we were able to infer in which directions their R&D was heading and which markets they were targeting.” Using Scopus, his team found a direct competitor’s published work in an obscure publication. “Having access to our competitor’s paper enabled us to pinpoint why our technology would likely be more economical than their technology,” he emphasizes. Flamini also used Scopus to set email alerts to inform him when specific authors published new papers. “It just took a couple of seconds to set up current awareness searches to keep track of what leading researchers in your field are doing,” he adds.

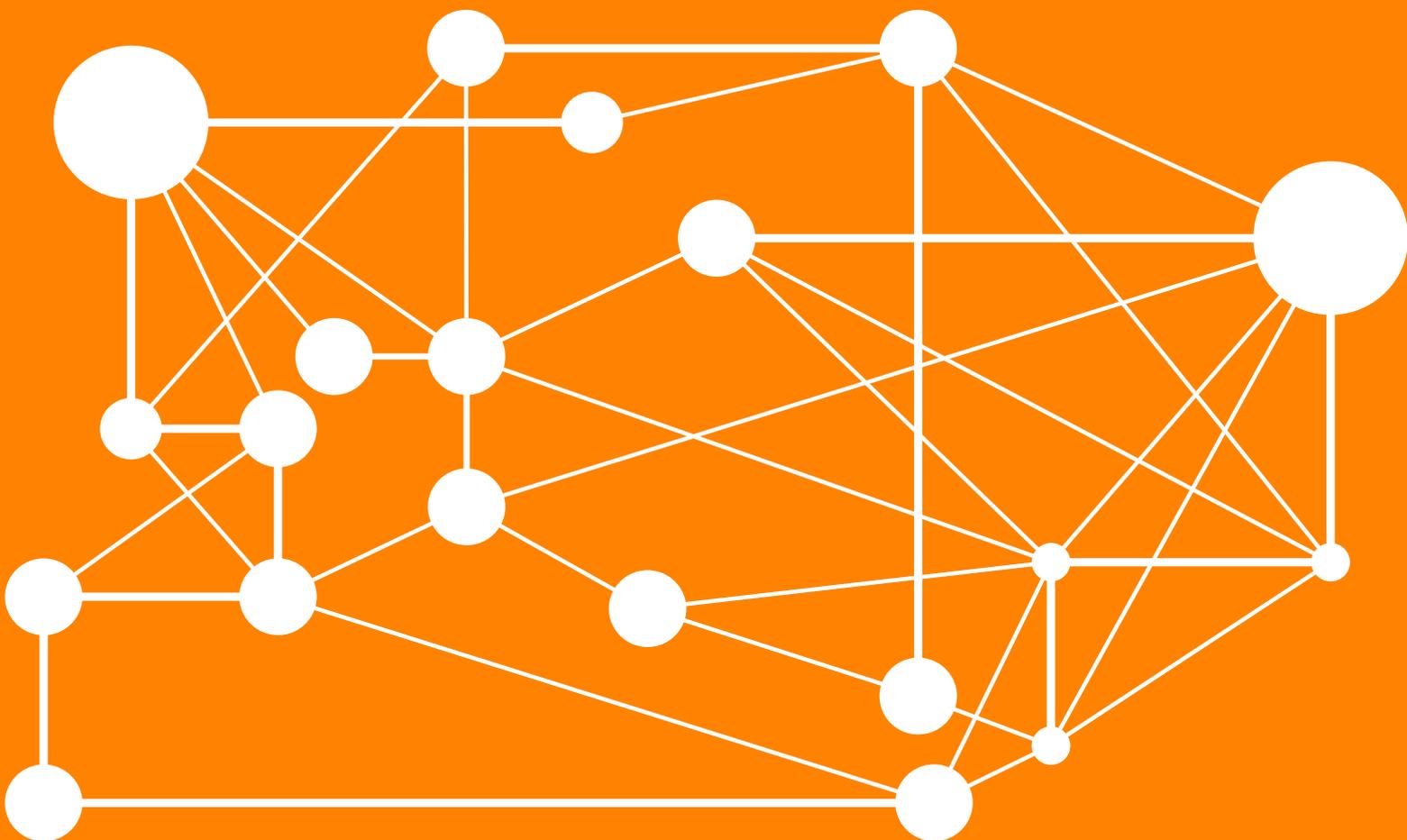
Impact: Saving an Entire Year of Research

By providing coverage of all scientific disciplines and publication alerts, Scopus helped Flamini’s team address its R&D tasks in less time. “Scopus helped the burn rate for our research significantly in ensuring all team members were productive. We had nearly 100 people working on the program, so we didn’t want a small problem slowing down progress,” Flamini points out.

When dealing with the trace contaminant issue, Flamini’s team realized substantial time and cost savings by using Scopus. “A couple of hours of literature searching with Scopus saved us a year of research,” Flamini stresses. “Holding up the entire program while we found a solution for a small part of the entire program would have cost us precious time and lots of money. That’s why saving time by using Scopus was always so important to us.”

Scopus also helped the team secure needed funding by enabling Flamini’s team to make the case that the novel gas separations technology it was developing would be more economical than a competitor’s. Flamini’s company presented his team’s analysis about the differences in the two technologies to a government agency. The agency chose to grant funds to underwrite his company’s technology rather than that of its competitor.

“One of the reasons I would use Scopus over other tools is its easy and intuitive interface, which has a much shorter learning curve than competing products,” Flamini concludes. “From a manager’s perspective, making sure the people in my group were staying abreast of current developments was one of my struggles, and so pointing them towards using Scopus as the tool to conduct literature searches and set publication alerts proved to be very effective.”



Scopus

Scopus enables chemical companies to identify experts and potential research partners, benchmark fundamental research competencies, and generate new business opportunities based on scientifically validated breakthrough technologies.

LEARN MORE

To request information or a product demonstration, please contact us at www.elsevier.com/solutions/scopus/contact-sales.

Visit www.elsevier.com/rd-solutions or contact your nearest Elsevier office.

ASIA AND AUSTRALIA

Tel: + 65 6349 0222

Email: sginfo@elsevier.com

JAPAN

Tel: + 81 3 5561 5034

Email: jpinfo@elsevier.com

KOREA AND TAIWAN

Tel: +82 2 6714 3000

Email: krinfo.corp@elsevier.com

EUROPE, MIDDLE EAST AND AFRICA

Tel: +31 20 485 3767

Email: nlinfo@elsevier.com

NORTH AMERICA, CENTRAL AMERICA AND CANADA

Tel: +1 888 615 4500

Email: usinfo@elsevier.com

SOUTH AMERICA

Tel: +55 21 3970 9300

Email: brinfo@elsevier.com