

Four ambassadors on the Dutch chemistry sector: what are they doing and what are their concerns?



Investment in the future

Dutch chemistry has never been an ivory tower, according to Louis Vertegaal. But the Top Sector Chemistry does provide extra opportunities to connect new companies to the innovation system. 'I am happy about the Top Sector Chemistry because it encourages us to make new connections. The top sector's focus on talent development, entrepreneurship and joint innovation on the basis of new knowledge is useful. NWO Chemical Sciences can contribute a lot to joint innovation in particular; to this end we have set up the top consortium New Chemical Innovations and have initiated the Fund New Chemical Innovations. Over the next few years we want to further expand our role as a broker for chemical knowledge and contacts. We are superbly equipped for this because we cover the entire academic field and can help those who approach us find partners in unexpected places. For example, we have linked art restorers to material technologists to analyse paintings, astrophysicists to quantum chemists to trace the origin of molecules in the universe, and experts in chemocatalysis to biotechnologists to convert biomass into valuable chemicals. But the emphasis on public-private partnership must not be at the

Progress with molecular precision

Chemists must continue to shine in the basics of their own discipline if they are to solve complex problems as well, argues Ben Feringa.



expense of the fundamental and non-programmed chemistry research. Demanding from us that we invest a large part of our budget in new forms of collaboration without offering us any compensation is a big risk. The open competition for curiosity driven research receives many superb proposals for chemical research. Such research forms the foundation of tomorrow's innovations. Therefore at least forty percent of these research proposals deserve funding. Yet at present a mere ten percent receive funding for no reason other than a lack of funds. If this continues Dutch chemistry will suffer irreparable damage. Then instead of facilitating the innovative strength of tomorrow our top sector policy will have undermined it. And we will certainly do everything in our power to prevent that!

LOUIS VERTEGAAL IS DIRECTOR OF NWO CHEMICAL SCIENCES.

'Whether we are talking about new medicines, alternatives for scarce materials, building blocks for the green chemical industry or sustainable energy, we will only make real progress on all of these fronts if we learn to understand and manage processes with molecular precision. The chemical perspective therefore takes centre stage with the associated expertise of physicists, biochemists and engineers. In this sense chemistry has an increasingly crucial role to play. We now face a double challenge. On the one hand we need to carefully formulate and translate urgent problems into scientific questions, so that we can put together the right teams of researchers who can jointly find a solution. On the other hand chemistry can only fulfil its key role well if it has a strong foundation. And we can do that: at Dutch universities a new generation of chemists is blossoming. They are exceptionally talented and internationally successful as evidenced by the many ERC Starting Grants they have received, and convinced of the power of chemistry. They demonstrate that chemistry is a superb design and manufacturing discipline and dare to take on the challenge of realising scientific breakthroughs through the molecular approach. They are willing and capable of working in partnerships and excel in bringing chemistry to the attention of a wider public. We must provide such talented chemists with sufficient opportunities both now and in the future so that they stay in the Netherlands.'

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