

The Groningen professors Sibrand Stratingh and Ben Feringa both conducted chemistry experiments as boys, and they both developed a car. Who was the man who gave his name to the *Stratingh Institute for Chemistry* to which Feringa is affiliated?

Forerunner

Stratingh's car



Sibrand Stratingh (1785-1841) was raised in the family of his uncle. This uncle ran a pharmacy on the A-Kerkhof in Groningen, now the Venema pharmacy. He studied medicine, sat his pharmacist's exam in 1808 and obtained his PhD in medicine in 1809. He married shortly afterwards and took over his uncle's pharmacy. Sibrand soon realized that his interests were much broader than simply running a chemist's shop. He found Professor Petrus Driessen's chemistry lessons of particular interest. With his friend Theodorus van Swinderen he set up the Society of Natural Sciences in 1801, now called the Royal Natural Sciences Society at Groningen. There, and probably in his uncle's pharmacy lab, the young Sibrand and his friends began conducting chemistry experiments. His first publication, which was also reviewed in German and French journals, appeared in 1806.



In 1812 Stratingh was appointed 'essayeur' at the *Bureau van Waarborg*, where he was responsible for testing gold and silver. For this part-time job he was given an office-cum-workshop on the Guldenstraat. The building was dubbed the 'Gold Office' and is still there to this day. In the absence of a textbook for his work, Stratingh wrote his first book: *Scheikundig Handboek voor Essayeurs*, or *Chemistry Handbook for Essayeurs*.

Several books followed shortly afterwards, about pharmaceutical subjects such as the production of quinine from cinchona bark and morphine from opium, for which he won growing international attention and recognition. In 1826 an epidemic broke out in Groningen, killing 10% of the population within the space of a year, and which entered the history books as 'the Groningen disease'. Stratingh played a key role in combating the disease through the application of a newly discovered bleach. He even set up a factory for the large-scale manufacture of this product. His book about his findings will have been widely referred to when the first major cholera epidemic swept through Europe several years later.

In 1823 Stratingh was appointed professor of chemistry, and in 1827 technology was added to this role. His research was wide-ranging, but focused primarily on applica-

tions. He became increasingly interested in electricity, which could be generated chemically using galvanic cells. When Michael Faraday made an apparatus that could generate electricity by a rotating pendulum, Stratingh also had one made, but one that worked better and which initially produced alternating current and later, using a commutator, direct current as well. If you could generate electricity through rotation, the opposite must also be the case: using electricity to produce rotation.

When Moritz von Jacobi became the first person to build an electric motor in 1834, Stratingh immediately thought that he could make a better one, and one with a useful application. That same year he and instrument maker Becker had built a steam-driven vehicle, which they had taken on a sensational test drive through the city of Groningen. What could be more logical than to use an electric motor to propel a vehicle? In late 1834 Stratingh and Becker presented a vehicle to the Society of Natural Sciences that was propelled by an electric motor, probably the very first electric car. The second version from 1835 still survives and can be admired at the University Museum. Stratingh died in 1841, at the age of just 56.

Who could have predicted that the chemist Feringa would also achieve fame through a car, but on a much smaller scale? The Nobel Committee wrote: 'Just as the world was amazed by the first electric motors and steam engines, molecular engines have the potential in the 21st century to experience explosive growth.' Electric motors and steam engines: this brings us back to Stratingh. And that explains why Feringa likes to show Stratingh's car in lectures. We've come full circle.