Odourless discovery

Sometimes discoveries fall out of the sky for scientists. It happened to bioengineer Marco Fraaije from the University of Groningen. Fraaije was working on the oxidation of alcohol compounds: he made molecules from the family of aromatic alcohols by using enzymes. The products of these reactions can be used to produce polymers and plastics. On a hunch he discovered that the enzyme he was using for the oxidation reaction also worked with thiol molecules. Thiols strongly resemble alcohols, but they have a sulphur atom instead of an oxygen atom. And they smell: skunks use thiols, but thiols also add taste to coffee, wine and popcorn. Fraaije’s oxidation reaction makes the smell of the thiols disappear. And so his research could lead to a spray that combats foul smells.

Rising sea levels could cause shortage of oxygen in deep sea

You wouldn’t think so lying on a beach in Italy, but the Mediterranean Sea harbours a unique mechanism. Water from the Atlantic Ocean flows into the surface through the narrow Strait of Gibraltar. This water contains less salt and is therefore lighter than the saltier Mediterranean water. While it flows eastward, much of the water on the top layer evaporates, making it saltier and heavier. Once it reaches Cyprus it sinks to the bottom, thus carrying oxygen to organisms in the deep sea. Geochemist Rick Hennemann from Utrecht University studied this mechanism and observed that a rise in the sea level could disturb this “ventilation”. The supply of oxygen to the deep sea would decrease, putting deep-sea life in the Mediterranean Sea at risk.