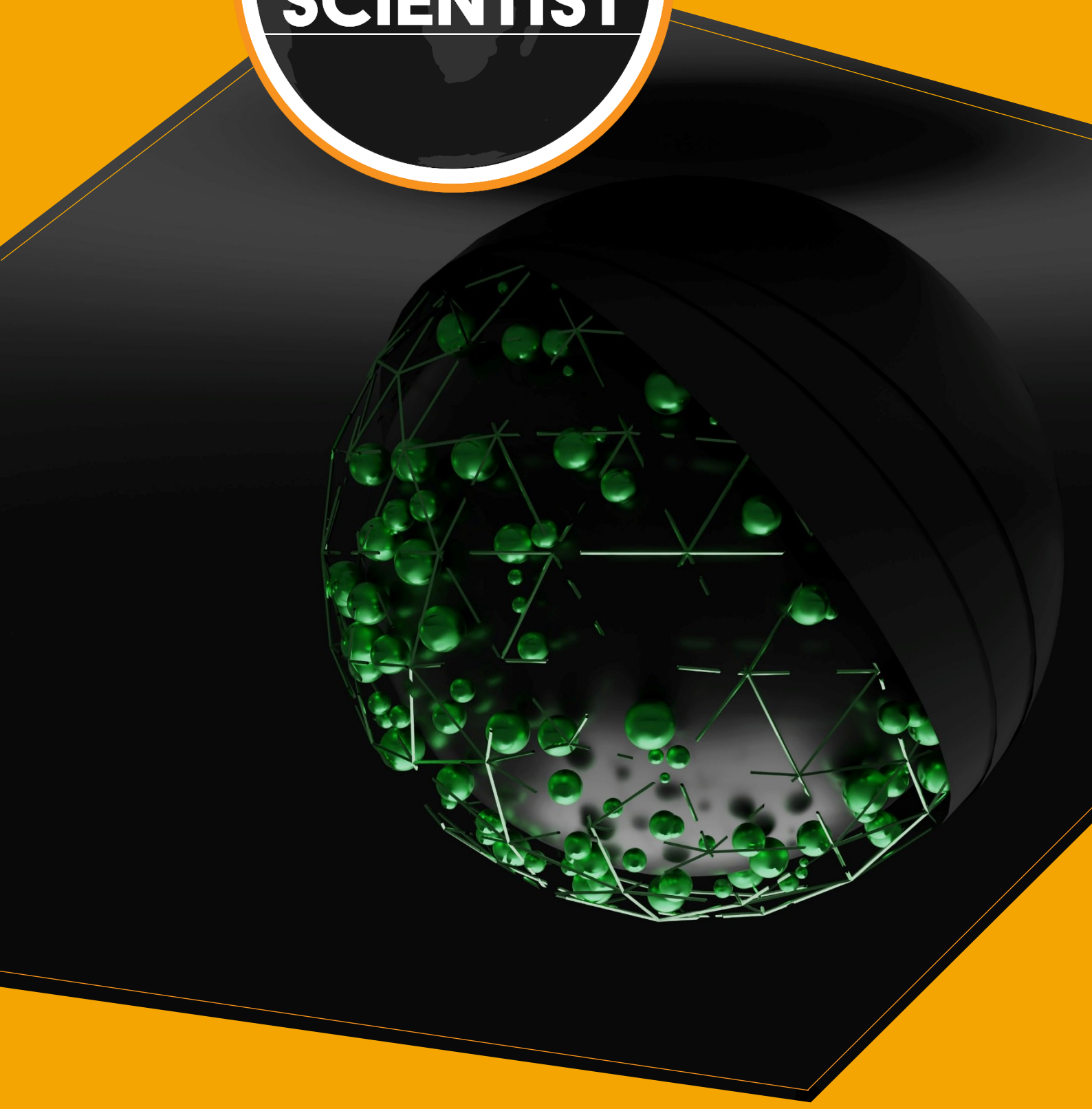
product overview

THE DUTCH SCIENTIST



scientific equipment for climate research, industrial measurements & air quality analysis

Greenhouse gas analyzers

High precision concentration analyzers (CRDS technology) and portable compact systems (CEAS/ICOS technology) for the measurement of greenhouse gases in an atmospheric background at parts-per-billion (ppb) sensitivity with negligible drift.

molecules : CO_2, CH_4, N_2O, H_2O (+CO & NH_3 as part of GHG analyzer)
applications : air quality, atmospheric science, emission monitoring, ecology, agriculture & soil science
supplier(s) : Picarro, Nikira Labs

Trace gas analyzers

Real-time, high precision gas analyzers (CRDS, CEAS/ICOS, PTR-TOF technology) for the analysis of (toxic) trace gases with up to parts-per trillion (ppt) sensitivity for the use of safety & compliance analysis in a room or the environment.

molecules : NH_3, CH_4, C_2H_2, C_2H_4, C_2H_4O, H_2S, HF, H_2CO, H_2O_2, HCl, VOC's
applications : air quality, pharmaceutical, petrochemical, emission monitoring
supplier(s) : Picarro, Ionicon, Nikira Labs

Air quality analyzers

Real-time, high precision, compact and robust gas analyzers (ICAD technology for highest sensitivity and chemiluminescence for AQ networks that require TÜV certification), and open-path remote sensing instruments (DOAS technology) for the measurement of nitrogen oxides (NO_x, NO_2, NO), HONO and other air pollutants such as SO_2, O_3, H_2CO and PM10/PM2.5/PM1 for air quality monitoring.

molecules : NO_2, NO, SO_2, O_3, H_2CO, H_2O, HONO, BrO, ClO_2, PM10, PM2.5, PM1
applications : air quality monitoring (in- & outdoor), ground-level validation of satellite remote sensing, mobile emission measurements of vehicles and ships
supplier(s) : Airyx, Picarro, Thermo Fisher Scientific

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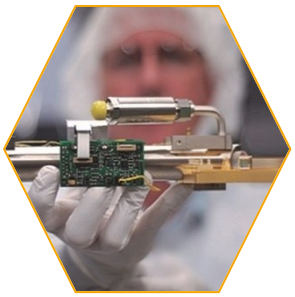
Isotopic analyzers



High precision isotope analyzers to measure and quantify stable isotope ratios resolving biochemical processes encoded in your sample.

molecules : $\delta^{13}C$ for CO_2/CH_4 ; $\delta^{15}N$ & $\delta^{18}O$ for N_2O ; $\delta^{18}O$, δD & $\delta^{17}O$ for H_2O
application(s) : atmospheric science, agriculture, soil science, ecology, hydrology, oceanography, paleoclimatology, food & beverage, petrochemical
supplier(s) : Picarro

Soil flux chambers & sensors

Gas monitoring instruments, such as automatic soil flux chambers, CO_2 sensors (Forced diffusion technology) to observe different vegetation types and measure specific ecosystem processes, such as soil respiration and net ecosystem exchange.

molecules : depending on the analyzer for flux chamber use, CO_2 for FD sensor
applications : agriculture & soil science, measuring net ecosystem exchange (NEE), partitioning NEE
supplier(s) : Eosense

Lysimeters and ecotrons

Delineated soil columns for laboratory or field use to determine water balance variables AND experimental units (ecotron) for the comprehensive study of ecosystem functions in the soil-plant-atmosphere continuum under controlled boundary conditions ; with a broad range of (meteorological) sensors.

applications : agriculture & soil science, ecology & plant physiology, hydrology
supplier(s) : Umwelt Geräte Technik (UGT)

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The Dutch Scientist is the local distributor in the Nordics, Benelux, UK & Ireland for scientific & industrial instrumentation used to study/measure climate change effects as well as monitoring health & product safety.

The Dutch Scientist
Kardinaal van Rossumplein 11
5211 RV 's-Hertogenbosch

+31 (0)6 2943 7116

info@thedutchscientist.com
www.thedutchscientist.com

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