



Fuel Cell STUDIES

QIC Series gas analysers with
real time gas/vapour analysis
for reaction studies



Membrane Inlet
Mass Spectrometer
(MIMS) / (DEMS)

SIMS surface
analysis for
characterisation of
active surfaces

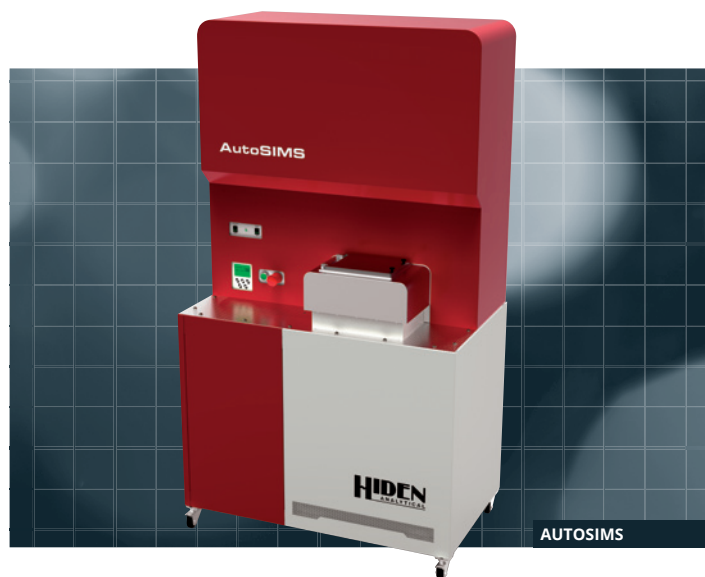
UHV TPD Workstation
system for studying
adsorption/desorption
mechanisms





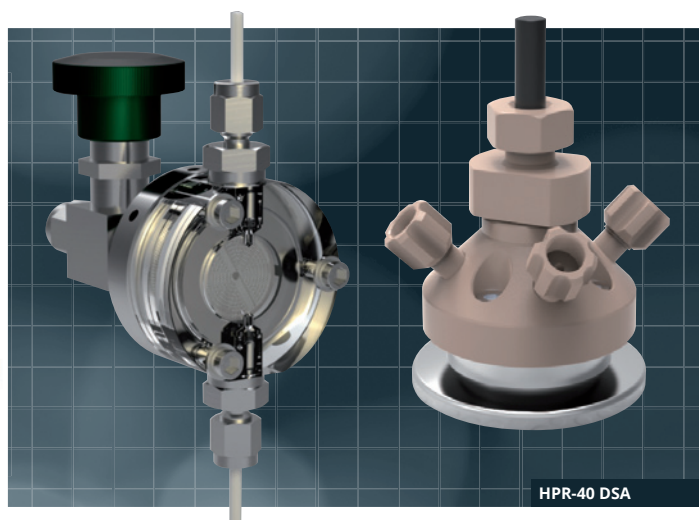
QIC Series gas analysers with real time gas/vapour analysis for reaction studies

- ▶ Analysis of reaction mixtures and product composition
- ▶ Detection of impurities in gas supply streams
- ▶ Detection range from PPB to 100%
- ▶ Mass range of 200 amu for detection of gases such as H_2 , CH_4 , NH_3 , H_2O , CO , CO_2 and Sulphur containing compounds
- ▶ Simple User Interface



SIMS surface analysis for characterisation of active surfaces

- ▶ SIMS Workstation for surface composition analysis
- ▶ High sensitivity – sub ppb detection of trace components



Membrane Inlet Mass Spectrometer (MIMS)/(DEMS)

- ▶ Electrochemistry/catalysis studies with the integrated cells for differential electrochemistry mass spectrometry (DEMS)
- ▶ Vitreous carbon electrode for catalyst coating
- ▶ Nanoporous membrane interface to the MS for fast response
- ▶ In situ determination of gaseous and volatile electrochemical reactants, reaction intermediates and products in real time



UHV TPD Workstation system for studying adsorption/desorption mechanisms

- ▶ Low background/High signal for optimum detection of desorption species
- ▶ 1000°C Sample stage with zero outgassing sample holder