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instruments for advanced science

30 Years

Multicapacity Microreactor for Catalyst Characterization

CATLAB Integrated Micro-reactor/MS

The Hiden Catlab integrated micro-reactor/mass spectrometer(MS) system now addresses an extended applications range with the introduction of enlarged sample capacity options to accommodate sample volumes up to 2mL. The system, developed for quantification of catalytic activity and thermal reaction processes in both R&D and QC laboratories, monitors gas and vapor reaction products directly from the sample position via the primary sampling interface embedded within the 1000oC fast-response furnace. The interface concept maintains optimum system performance throughout the full sample capacity range down to 0.1 mL, with the cartridge-style sample holders enabling fast and accurate sample placement.

LABview-based software is fully user-programmable to define the furnace temperature profile and ramp rate, establish MS data acquisition parameters, input gas/vapor flow through up to 8 mass flow controllers(MFC's), and select valve switching functions including pulse gas injection for chemi-sorption measurement. The temperature profile determines the trigger-points to change gas composition, to inject gas pulses and to stop/start data acquisition. Additionally MS analysis files can be selected and matched to specific sections of the experiment to ensure optimum data at each stage.

The CATLAB system is engineered for combined reactor/MS system operation yet is readily decoupled to enable operation of the mass spectrometer as a standalone laboratory and process gas analyzer, a secondary interface providing a decoupling point for off-line MS operation.

For further information on this or other Hiden Analytical products contact Hiden Analytical Inc. at info@hideninc.com or visit the main website at www.HidenInc.com