

## Valued clients,

welcome to the 4th edition of the HiBarSens® newsletter. 2013 has been a successful year in launching the upgraded HiBarSens® system, which offers now uniquely three measurement modes. HiBarSens® is also the only commercially available system which measures correctly down to the  $10^{-6} \text{ g m}^{-2} \text{ d}^{-1}$  range. Our latest development has been an adapter plate which offers customers the flexibility in measuring smaller samples. Furthermore we are offering cluster solutions for higher throughput.

In 2014 we will present our latest developments at various events and we are looking forward to welcome you personally to our booth at the upcoming exhibitions.

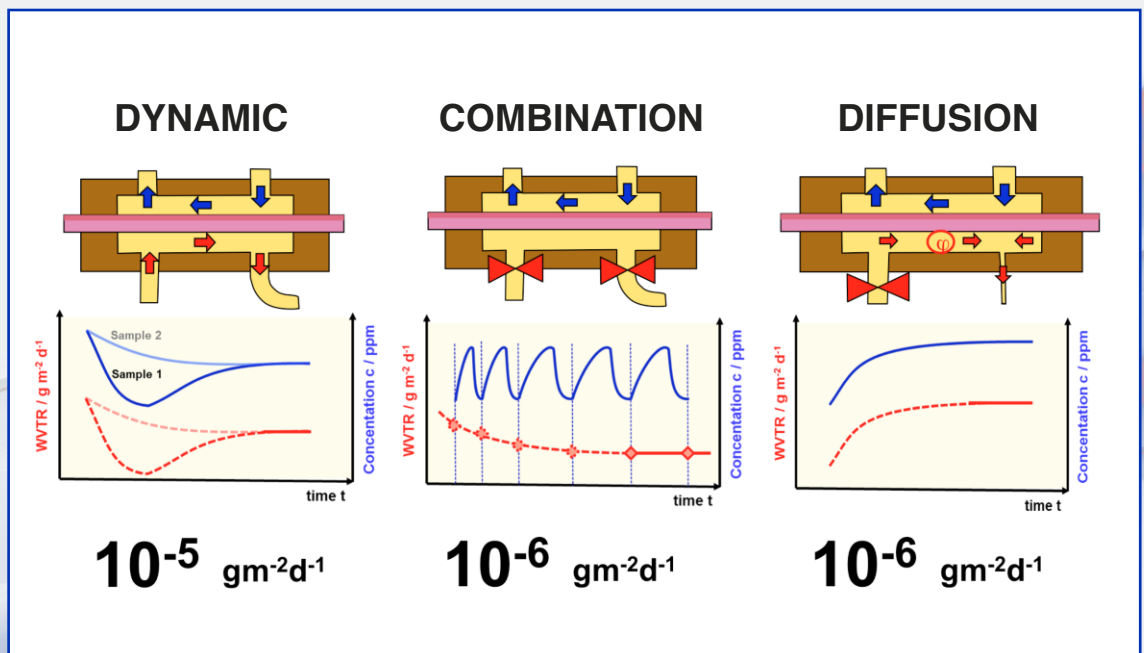
## HiBarSens® Technology

### One System – Three Measurement modes

HiBarSens® uniquely offers 3 different measurement modes which enable a measurement range between  $10^{-6} - 2 \text{ g m}^{-2} \text{ d}^{-1}$ . **DYNAMIC** mode is the standard carrier gas mode which enables the important steady state conditions for the measurement via a slight purge of carrier gas through the measurement chamber. The detection limit of this mode has been pushed down into the high range of  $10^{-5} \text{ g m}^{-2} \text{ d}^{-1}$ . The required purge through the measurement cell causes a dilution of the moisture concentration, which limits the detection of this mode.

The newly developed **DIFFUSION** and **COMBINATION** modes innovatively overcome this hurdle as both are decoupling the actual measurement of WVTR from the moisture concentration in the cell.

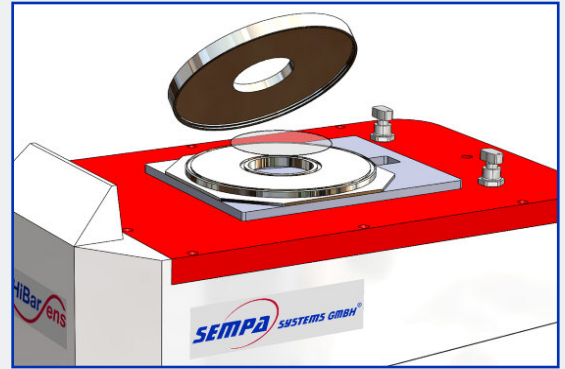
In our previous issues of this newsletter we have presented those two new modes already in detail and latest measurements really show performance in  $10^{-6} \text{ g m}^{-2} \text{ d}^{-1}$  range.



## Adapter Plate

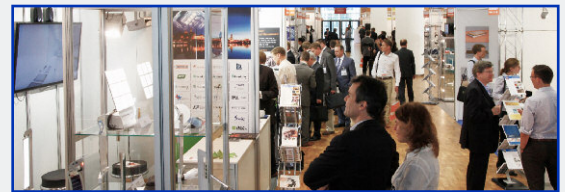
Especially in R&D sample diameters can be rather small. With the newly developed adapter plate HiBarSens® addresses this issue as we are now able to measure samples down to a diameter of 85 mm.

The design of the adapter plate also features the important ActiveSeal technology, which enables ambient effect free measurements. Please contact us for further information on this additional feature for the HiBarSens® system.



## Meet us at the next upcoming events:

In 2014 the SEMPA HiBarSens® team is present at numerous events globally. Please visit us at the following shows:



**Flextech**  
[www.flextech.org](http://www.flextech.org)

Phoenix/AZ, USA  
3.2.2014 - 6.2.2014



**Printed Electronics**  
[www.idtechex.com/printed-electronics-europe](http://www.idtechex.com/printed-electronics-europe)

Berlin, Germany  
1.4.2014 - 2.4.2014



**Highly Functional Film**  
[www.filmtech.jp/en](http://www.filmtech.jp/en)

Tokyo Big Sight, Japan  
16.4.2014 - 18.4.2014



**SEMICON Russia 2014**  
[www.semiconrussia.org/en](http://www.semiconrussia.org/en)

Moscow, Russia  
14.5.2014 - 15.5.2014



**LOPEC**  
[www.lopec.com](http://www.lopec.com)

Munich, Germany  
26.5.2014 - 28.5.2014



**ICCG 10**  
[www.iccg10.de](http://www.iccg10.de)

Dresden, Germany  
22.6.2014 - 26.6.2014



**Semicon Taiwan**  
[www.semicontaiwan.org/en](http://www.semicontaiwan.org/en)

Taipei, Taiwan  
3.9.2014 - 5.9.2014

**FLEET Workshop Korea**

Seoul, South Korea  
18.9.2014 - 19.9.2014

**CEREBRA Workshop Japan**

Osaka, Japan  
24.9.2014 - 26.9.2014

**Ultra Barrier Workshop**

Dresden, Germany  
27.11.2014

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