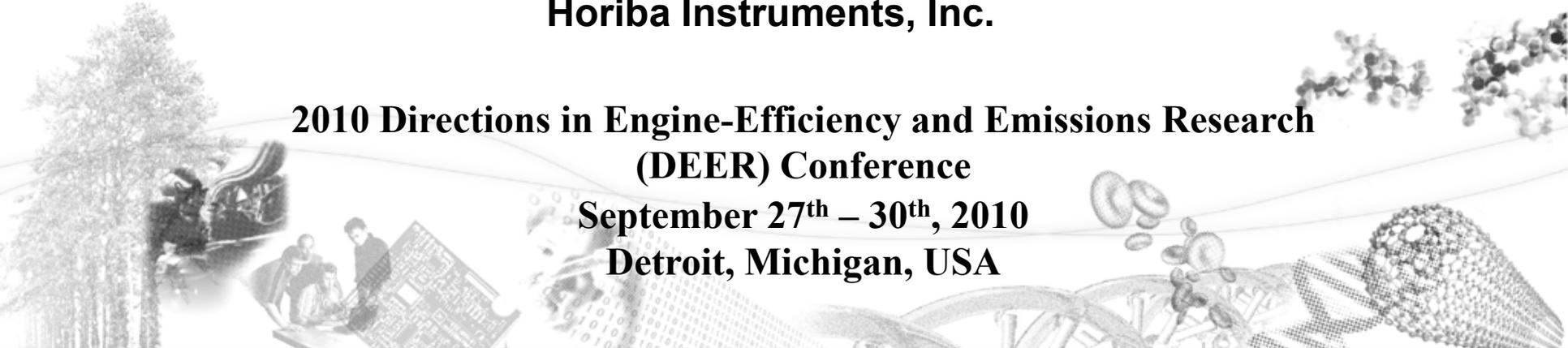




# Performance of the low efficiency diesel particulate filter for diesel PM reduction

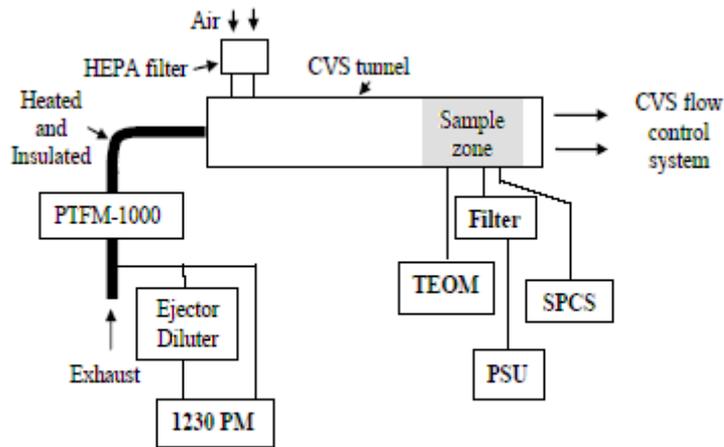
**Poster Session Location Number  
P-15**

**Qiang Wei  
Horiba Instruments, Inc.**



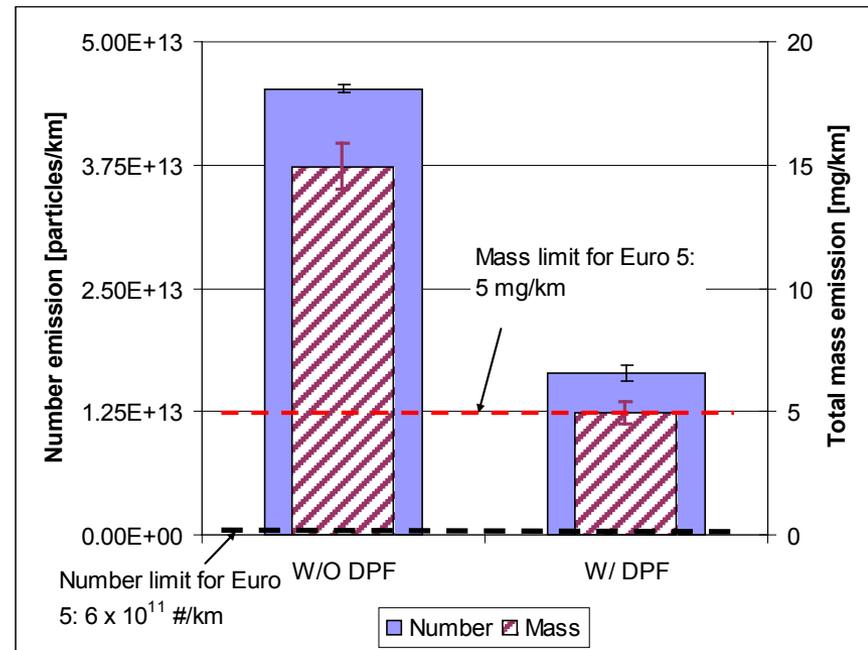
**2010 Directions in Engine-Efficiency and Emissions Research  
(DEER) Conference  
September 27<sup>th</sup> – 30<sup>th</sup>, 2010  
Detroit, Michigan, USA**

# Flow-through DPF



Four instruments were used to characterize diesel PM

- CVS with a PSU for gravimetric mass measurement
- SPCS: measure solid particle number concentration in real-time
- 1230 PM: measure soot and SOF in real-time (A standalone pitot tube flow meter was used to measure exhaust flow)
- TEOM: measure PM mass emission in real-time (5 s moving average for data)



## Conclusions

- The Euro 4 Vehicle retrofitted with the low efficiency flow-through DPF:
  - Achieves the Euro 5 mass emission standard
  - Not number standard
- To make this vehicle meet both mass and number standards, a DPF with 98% filtration efficiency must be used.