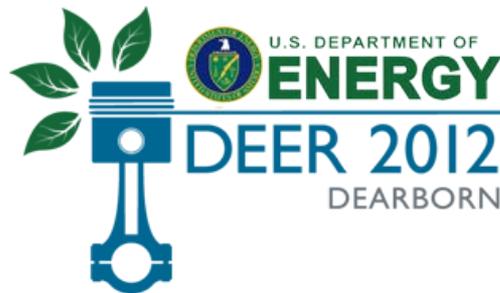
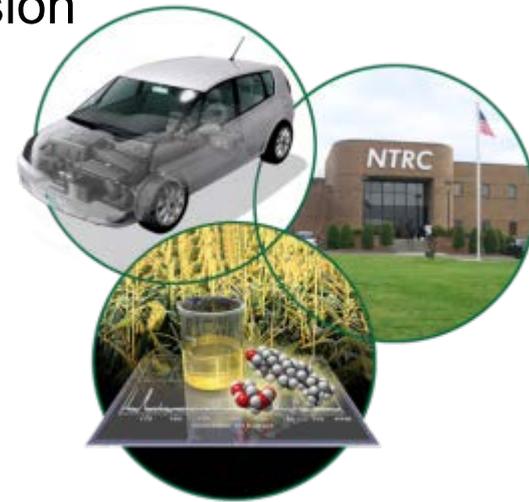


# Ammonia Sensors Based on Doped-Sol-Gel-Tipped Optical Fibers for Catalyst System Diagnostics

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# Diagnostics to enable *efficiency improvements*

- Engine exhaust application in SCR catalysts
  - SCR control: oxidation, coordination of copper
  - NH<sub>3</sub> utilization & slip (5ppm detection limit)
  - Urea decomposition & distribution
- Improved diagnostics → broader development applications
  - Intra-monolith, single-entry fluorescence probe made of catalyst
  - ~100-sec t<sub>90</sub>; applicable to exhaust temperatures & O<sub>2</sub> levels

