# Cold-Start Emissions Control in Hybrid Vehicles Equipped with a Passive Adsorber for Hydrocarbons and NOx


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**Poster – P13**

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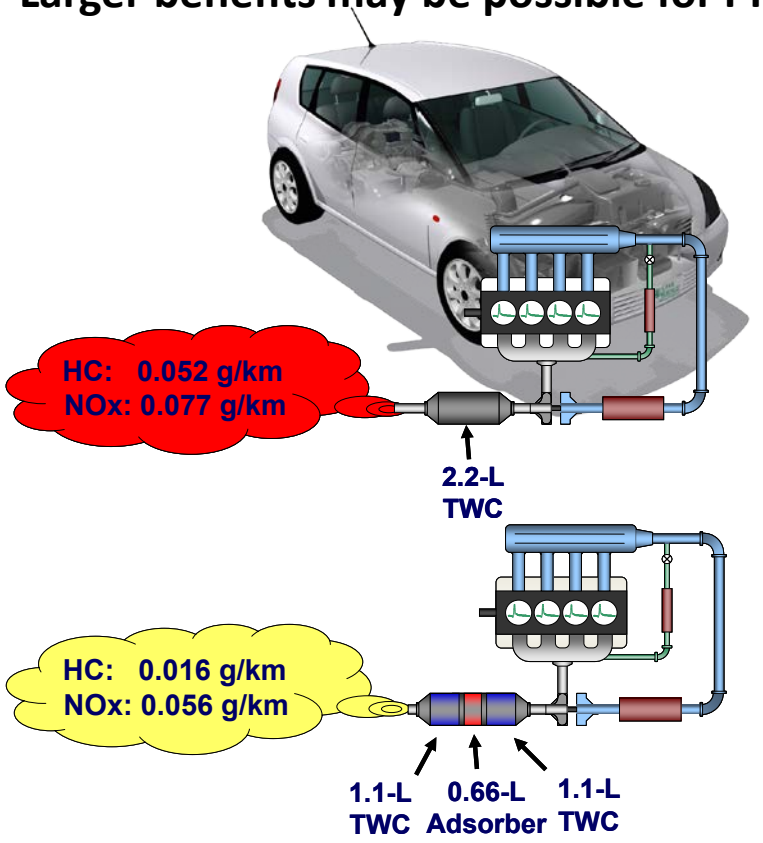
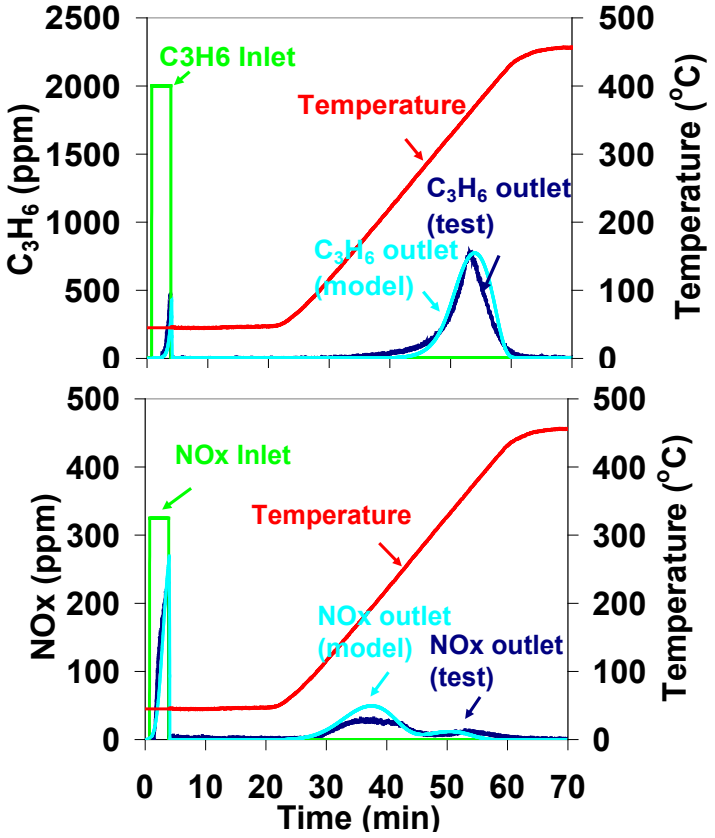
## Our studies reveal the potential for using chemisorbing materials to temporally trap HC and NOx emissions during cold-start periods in HEVs and PHEVs over transient driving cycles.

- HC and NOx tailpipe emissions can be reduced several fold with the appropriate combination of sorbent properties
- Impact of the passive trapping depends on sorbent properties and engine exhaust temperature swings
- Larger benefits may be possible for PHEVs




HC and NOx nreakthrough profiles for the fixed-bed sorber containing a mixing sorbent

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