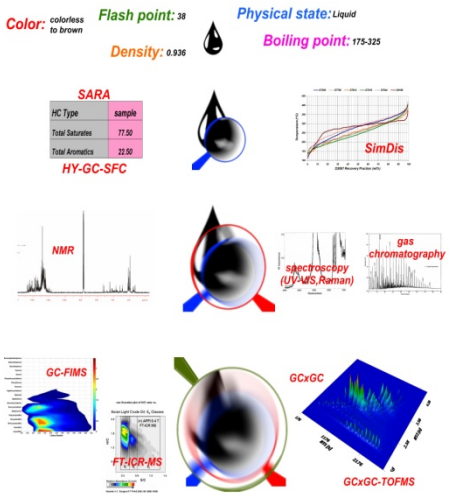
CanmetENERGY

Leadership in ecoInnovation

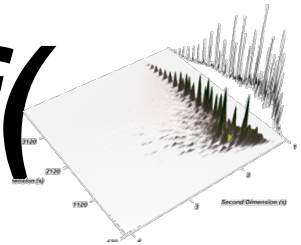


Application of advanced hydrocarbon characterization and its consequences on future fuel properties and advanced combustion research

U.S. DEPARTMENT OF ENERGY
DEER 2012
DEARBORN
DIRECTIONS IN ENGINE-EFFICIENCY AND EMISSIONS RESEARCH CONFERENCE

Rafal Gieleciak, Craig Fairbridge and Darcy Hager

Presented by: Rafal Gieleciak

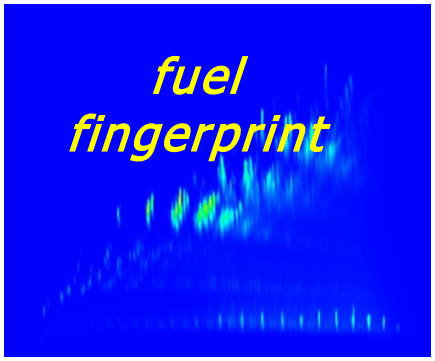
$= f($  $)$

- *Many research studies carried out around the world are focused on advanced engine combustion technologies such as HCCI or RCCI.*

- *Tomorrow's combustion technology may be to a large degree dependent on fuel physical properties. In turn, physical properties are dependent on chemical composition.*

- *Advanced analytical methods such as GCxGC are becoming both more powerful and easier to use.*

- *GC x GC chromatograms are fingerprints of fuels.*



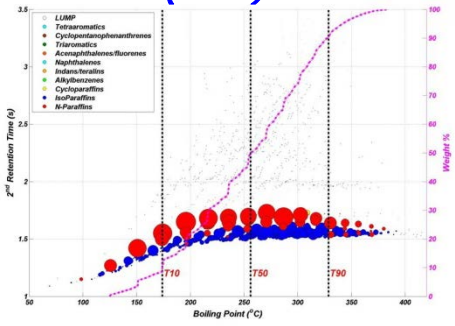
$\cong$

- *How to get a deeper insight into fuels?*

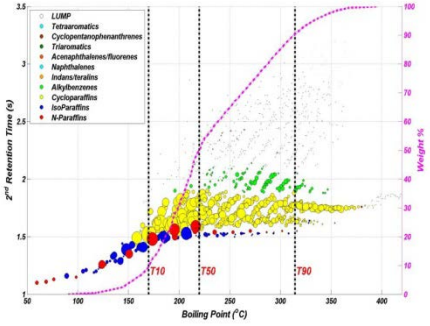
- *How we can utilize the analytical information to prediction of bulk properties of the fuels?*

- *Can a small modification to fuel hydrocarbon fingerprint change future engine performance?*

Fisher-Tropsch diesel (GTL)



Renewable diesel (pyrolysis product)



CanmetENERGY

Leadership in ecoInnovation

Natural Resources Canada | Ressources naturelles Canada

Poster Location: P-14

Canada