The Effects of Fuel Composition and Compression Ratio on Thermal Efficiency in an HCCI Engine

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Poster P-14
• Compression ratio can be used to control HCCI combustion
  • High octane number fuels require higher CR to achieve ignition
  • Does efficiency increase with CR?
• 2-cylinder variable CR research engine, wide octane number range
• Complex relationship between fuel composition, CR, pressure rise rate, thermal efficiency, and CR

Poster P 14