

# Acronyms

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ADVISOR™ .....	ADvanced Vehicle SimulatOR
AFDC.....	Alternative Fuels Data Center
AFR .....	Air-to-fuel ratio
ANL .....	Argonne National Laboratory
APFB-DEC.....	Advanced petroleum-based fuels - diesel engine control
APRF .....	Advanced Powertrain Research Facility
APS.....	Advanced Photon Source
ASME .....	American Society of Mechanical Engineers
ATOF-MS.....	Aerosol time-of-flight mass spectrometer
AVTA .....	Advanced Vehicle Testing Activity
BMEP .....	Brake mean effective pressure
BS .....	Brake specific
BSFC.....	Brake-specific fuel consumption
CAMS .....	Center for Accelerated Mass Spectrometry
CARB .....	California Air Resources Board
CBD cycle .....	Central Business District cycle
CDPF .....	Catalyzed diesel particulate filter
CDPF .....	Continuously regenerating diesel particulate filter
CEC.....	California Energy Commission
CFA .....	Consortium for Fuels Assessment
CFD .....	Computational fluid dynamics
CIDI.....	Compression ignition direct injection
CMB .....	Chemical mass balance
CNG .....	Compressed natural gas
CPSI.....	Cells per square inch
CRADA .....	Cooperative research and development agreement
CRF .....	Combustion Research Facility
CRT .....	Continuously regenerating technology
CSHV cycle .....	City-suburban heavy vehicle cycle
DCSF .....	Diesel Combustion Simulation Facility
DECSE.....	Diesel emissions control sulfur effects
DOC.....	Diesel oxidation catalyst
DOE .....	U.S. Department of Energy
DPF .....	Diesel particulate filter
DPNR.....	Diesel particulate and NOx reduction
EC .....	Elemental carbon
ECU .....	Emissions/electronic/engine control unit
EEPS™ .....	Engine exhaust particle sizer spectrometer
EERE .....	Energy Efficiency and Renewable Energy
EGR .....	Exhaust gas recirculation
ELPI.....	Electric low-pressure instrument
EMSL.....	Environmental Molecular Science Laboratory
EPA .....	U.S. Environmental Protection Agency
ETC cycle.....	European Transit Cycle
EV.....	Electric vehicle
FBC .....	Fuel-borne catalyst
FE .....	Fuel efficiency
F-T .....	Fischer-Tropsch
FTIR.....	Fourier transform infrared



GC-MS	Gas chromatograph - mass spectroscopy	LNG	Liquified natural gas
GDI	Gasoline direct injection	LNT	Lean NOx trap
GHG	Greenhouse gases	LTC	Low-temperature combustion
GTL	Gas to liquids	MARAD	U.S. Maritime Administration
GTRI	Georgia Tech Research Institute	MDPV	Medium-duty passenger vehicle
HC	Hydrocarbon	MEL	Mobile emissions laboratory
HCCI	Homogeneous charge compression ignition	MEMS	Mobile emissions measurement system
HEV	Hybrid electric vehicle	MI	Main injection
HLDT	Heavy light-duty vehicle	MK	Modulated kinetics
HPLC	High-performance liquid chromatograph	MOUDI	Micro-orifice uniform deposit impacter
HT	Hydrothermally aged	NAC	NOx adsorber catalyst
HTCD	Heavy truck clean diesel	NASA	National Aeronautics and Space Administration
HTM	High thermal mass	NFC	Near-frictionless carbon
HTML	High-Temperature Materials Laboratory	NIOSH	National Institute for Occupational Safety and Health
ICE	Internal combustion engine	NIST	National Institute of Standards and Technology
INEEL	Idaho National Engineering and Environmental Laboratory	NLTC	Novel low-temperature combustion
IQT™	Ignition quality tester	NMHC	Non-methane hydrocarbon
LANL	Los Alamos National Laboratory	NMVOC	Non-methane volatile organic compounds
LED	Low-emitting diesel	NPBF	Non-petroleum based fuels
LEP	Low-Emissions Partnership	NREL	National Renewable Energy Laboratory
LIBS	Laser-induced breakdown spectroscopy	NTE	Not to exceed
LIDELS	Laser-induced desorption with elastic light scattering	NTP	Non-thermal plasma
LIF	Laser-induced fluorescence	NTPAC	Non-thermal plasma-assisted catalysis
LII	Laser-induced incandescence	NTRC	National Transportation Research Center
LLNL	Lawrence Livermore National Laboratory	NYB cycle	New York City bus cycle
LNC	Lean NOx catalyst	NYC cycle	New York City cycle



NYSERDA	New York State Energy Research and Development Authority
OBD	On-board diagnostics
OC	Organic carbon
OEM	Original equipment manufacturer
OFCVT	Office of FreedomCAR and Vehicle Technologies
ORNL	Oak Ridge National Laboratory
PAH	Polycyclic aromatic hydrocarbon
PCCI	Premixed charge compression ignition
PFC	Plasma-assisted catalysis
PI	Pilot injection
PM	Particulate matter
PNGV	Partnership for a New Generation of Vehicles
PNNL	Pacific Northwest National Laboratory
PSAT	Powertrain systems analysis toolkit
RAC	Reformer-assisted catalysis
RAS	Resonance absorption spectroscopy
ReFUEL	Renewable fuels and lubricants
RSV	Respiratory syncitial virus
RTC	Residence time chamber
SAD	Selected area diffraction
SAE	Society of Automotive Engineers
SCAAP	Supercomputer Automotive Applications Partnership
SCAQMD	South Coast Air Quality Management District
SCCI	Stratified charge compression ignition
SCR	Selective catalytic reduction
SI	Spark ignition
SMPS	Scanning mobility particle sizer
SNL	Sandia National Laboratories
Spaci-MS	Spatially resolved, capillary-inlet mass spectrometer
SPLAT-MS	Single-particle laser ablation time-of-flight mass spectroscopy
SULEV	Super-ultra low emissions vehicle
SV	Space velocity
SVOC	Semi-volatile organic compounds
TAC	Toxic air contaminant
TDI	Turbocharged direct injection
TEG	Thermoelectric generator
TEM	Transmission electron microscope
TG	Thermogravimetric
THC	Total hydrocarbons
TPM	Total particulate matter
UC test	Unified Cycle test
ULPD	Ultra low pressure drop
ULSD	Ultra low sulfur diesel
USC	University of Southern California
USCAR	U.S. Council for Automotive Research
UT	University of Tennessee
VMT	Vehicle-miles traveled
VOC	Volatile organic compounds
WIS	Water-injection system
ZEV	Zero emissions vehicle

