

## 9. Acronyms

The following list of Acronyms cited within the report is provided as a reference for readers.

Acronym	Definition
<b>1D</b>	One Dimensional
<b>2D</b>	Two Dimensional
<b>3D</b>	Three Dimensional
<b>3-DEP</b>	Three Dimensional Engineered Preform
<b>A123</b>	A123 Systems
<b>ABA</b>	Anion Binding Agents
<b>ABR</b>	Advanced Battery Research
<b>ABRT</b>	Advanced Battery Research for Transportation
<b>AC</b>	Alternating Current
<b>A/C</b>	Air Conditioning
<b>ACEC</b>	Advanced Combustion and Emissions Control
<b>ACUA</b>	Atlantic County Utilities Authority
<b>ADA</b>	American with Disabilities Act
<b>ADT</b>	Accelerated Durability Test
<b>AEC</b>	Advanced Engine Combustion
<b>AEV</b>	All Electric Vehicle
<b>Afm</b>	Alumina, ferric oxide, monosulfate phase
<b>AFRL</b>	Air Force Research Laboratory
<b>AFV</b>	Alternative Fuel Vehicle
<b>Ah</b>	Ampere-hour
<b>AHSS</b>	Advanced High Strength Steel
<b>Al-12Fe</b>	High-temperature Aluminum Alloy Composition
<b>Al-8Fe</b>	High-temperature Aluminum Alloy Composition
<b>Al</b>	Aluminum
<b>ALD</b>	Atomic Layer Deposition
<b>AlF3</b>	Aluminum Fluoride
<b>AlN</b>	Aluminum Nitride
<b>Al2O3</b>	Aluminum Oxide
<b>AMR</b>	Annual Merit Review
<b>ANL</b>	Argonne National Laboratory
<b>ANSI</b>	American National Standards Institute
<b>APE</b>	Advanced Power Electronics
<b>APEEM</b>	Advanced Power Electronics and Electric Machines Program
<b>API</b>	American Petroleum Institute
<b>APRF</b>	Advanced Powertrain Research Facility (ANL)

Acronym	Definition
<b>APS</b>	Advanced photon source
<b>APU</b>	Auxiliary Power Unit
<b>AQMD</b>	Air Quality Management District
<b>ARPA-e</b>	Advanced Research Projects Agency-Energy
<b>ARRA</b>	American Recovery and Reinvestment Act
<b>ASE</b>	Automotive Service Excellence
<b>ASHRAE</b>	American Society of Heating, Refrigerating and Air Conditioning Engineers
<b>ASIC</b>	Application-Specific Integrated Circuit
<b>ASTM</b>	American Society for Testing and Materials
<b>Au</b>	Gold
<b>AVFL</b>	Advanced Vehicle/Fuel/Lubricant Committee
<b>AVFL-19</b>	Project 19 under Advanced Vehicle/Fuel/Lubricants of the Coordinating Research Council
<b>AVX</b>	AVX Corporation
<b>AWG</b>	American Wire Gauge
<b>AZ31</b>	a Magnesium alloy
<b>B20</b>	Biodiesel blend of 20% neat biodiesel
<b>B100</b>	Biodiesel blend of 100% neat biodiesel
<b>B4C</b>	Boron carbide
<b>BASF</b>	a chemical company
<b>BATT</b>	Batteries for Advanced Transportation Technologies
<b>BD</b>	Biodiesel
<b>BDMS</b>	Battery Database Management System
<b>BES</b>	DOE Basic Energy Sciences
<b>BET</b>	Brunauer, Emmett, and Teller
<b>BEV</b>	Battery Electric Vehicle
<b>BMEP</b>	Brake Mean Effective Pressure
<b>BMS</b>	Battery Management System
<b>BNL</b>	Brookhaven National Laboratory
<b>BOPP</b>	Bi-axially Oriented Polypropylene (film)
<b>BPU</b>	Board of Public Utilities
<b>BSFC</b>	Brake-specific fuel consumption
<b>BTE</b>	Brake Thermal Efficiency
<b>C</b>	degrees Celsius
<b>C</b>	Carbon
<b>CA</b>	Commercially Available
<b>CAEBAT</b>	Computer-Aided Engineering of Batteries
<b>CAFE</b>	Corporate Average Fuel Economy
<b>CALCE</b>	Center for Advanced Life Cycle Engineering (UMD)
<b>CAN</b>	Controller Area Network
<b>CARB</b>	California Air Resources Board
<b>CB</b>	Carbon Black

Acronym	Definition
CC	Clean Cities
CCSF	City College of San Francisco
$C_d$	Coefficient of Drag
CE	Coulombic Efficiency
CEC	California Energy Commission
CEC	Clean Energy Coalition
CEQA	California Environmental Quality Act
CF	Carbon Fiber
CF8C-Plus	A type of cast austenitic stainless steel
CFD	Computational Fluid Dynamics
CFF	Cell Fabrication Facility (Prototype)
CI	Compression Ignition
CIDI	Compression-ignition Direct-injection
CLEERS	Cross-Cut Lean Exhaust Emission Reduction Simulation
CMAQ	Congestion Mitigation and Air Quality Program
CMC	Carboxymethyl Cellulose
CNG	Compressed Natural Gas
CNT	Carbon Nanotubes
Co	Cobalt
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
COP	Coefficient of performance
CR	Coefficient of Rolling Resistance
CRADA	Cooperative Research and Development Agreement
CRC	Coordinating Research Council
CSI	Current Source Inverter
CSCG	Core-Shell with Concentration Gradient
CSTR	Continually Stirred Tank Reactor
CTE	Career and technical education
Cu	Copper
CVD	Chemical Vapor Deposition
DADT	Developmental & Applied Diagnostic Testing
DBBB	2,5-di-tert-butyl-1,4-bis(2-methoxyethoxy)benzene
DBA	Direct Bonded Aluminum
DBC	Direct Bonded Copper
DC	Direct Current
DEG	Diesel equivalent gallons
DEP	Department of Environmental Protection
DERC	Diesel Engine Research Consortium
DFT	Density Functional Theory
DISI	Direct Injection Spark Ignited

Acronym	Definition
<b>DOC</b>	Diesel oxidation catalyst
<b>DoD</b>	Depth of Discharge
<b>DOD</b>	Department of Defense
<b>DOE</b>	Department of Energy
<b>DoE</b>	Design of Experiment
<b>DOT</b>	Department of Transportation
<b>DPF</b>	Diesel Particulate Filter
<b>DSC</b>	Differential Scanning Calorimetry
<b>DSRC</b>	Dedicated Short-Range Communications
<b>DTNA</b>	Daimler Trucks North America
<b>E85</b>	85 percent Ethanol blend with gasoline
<b>EADPF</b>	Electrically-Assisted Diesel Particulate Filter
<b>EAR</b>	E-A-R Thermal Acoustic Systems
<b>EATS</b>	Exhaust Aftertreatment System
<b>EB</b>	Electron Beam
<b>EC</b>	Ethylene Carbonate
<b>EC</b>	European Commission
<b>ECI</b>	Electronic Concepts, Inc.
<b>ECN</b>	Engine Collaboration Network
<b>ECS</b>	Emission Control Systems
<b>EDAX</b>	Energy Dispersive Analysis X-Ray
<b>EDV</b>	Electric-Drive Vehicle
<b>EFG</b>	EV quick reference guide
<b>EGR</b>	Exhaust Gas Recirculation
<b>EIS</b>	Electrochemical Impedance Spectroscopy
<b>EISA</b>	Energy Independence and Security Act
<b>EMA</b>	Engine Manufacturers Association
<b>EMC</b>	Ethyl Methyl Carbonate
<b>EMC</b>	Epoxy Molding Compounds
<b>EMI</b>	Electromagnetic Interference
<b>EMS</b>	Emergency medical services
<b>EMT</b>	Emergency medical technician
<b>EO</b>	Engine Out
<b>EOL</b>	End of Life
<b>EP</b>	Extreme Pressure
<b>EPA</b>	Environmental Protection Agency
<b>EPAct</b>	Energy Policy Act
<b>EPRI</b>	Electric Power Research Institute
<b>ERC</b>	Engine Research Center
<b>ES124</b>	DOE Energy Storage Program (advanced prognostics modeling tool)
<b>ESCA</b>	Electron Spectroscopy for Chemical Analysis

Acronym	Definition
<b>ESL</b>	Equivalent Series Inductance
<b>ESMS</b>	Energy Storage Monitoring System
<b>ESR</b>	Equivalent Series Resistance
<b>ESS</b>	Energy Storage System
<b>ETM</b>	Electro-Thermo-Mechanical
<b>EU</b>	European Union
<b>EUCAR</b>	European Council for Automotive R&D
<b>EV</b>	Electric Vehicle
<b>EVSE</b>	Electric Vehicle Supplemental (Supply) Equipment
<b>EVSP</b>	Electric Vehicles Standards Panel
<b>EXAFS</b>	Extended X-ray Absorption Fine Structure
<b>FACE</b>	Fuels for Advanced Combustion Engines
<b>FCHEV</b>	Fuel Cell Hybrid Electric Vehicle
<b>FCV</b>	Fuel Cell Vehicle
<b>FE</b>	Finite Element
<b>FEA</b>	Finite Element Analysis
<b>FEC</b>	Fluorinated Ethylene Carbonate
<b>FEM</b>	Finite element method
<b>FFRL</b>	Fatigue and Fracture Research Laboratory
<b>FMEP</b>	Friction mean effective pressure
<b>FMVSS</b>	Federal Motor Vehicle Safety Standards
<b>FOA</b>	Funding Opportunity Announcement
<b>FOM</b>	Figure of Merit
<b>FPE</b>	Free-piston engine
<b>FST</b>	Fast Summation Transformation
<b>FSW</b>	Friction Stir Welding
<b>FTE</b>	Full time equivalent
<b>FTIR</b>	Fourier Transform Infrared Spectroscopy
<b>FY</b>	Fiscal Year
<b>GATE</b>	Graduate Automotive Technology Education
<b>GEN2</b>	Generation 2
<b>GDI</b>	Gasoline Direct Injection
<b>GGE</b>	Gasoline Gallon Equivalent
<b>GHG</b>	Greenhouse Gases
<b>GHS</b>	Greenhouse
<b>GIS</b>	Geographic Information Systems
<b>GITT</b>	Grid Integration Tech Team
<b>GM</b>	General Motors Corporation
<b>GOSS</b>	Grain-Oriented Silicon Steel
<b>GPRA</b>	Government Performance and Results Act

Acronym	Definition
<b>gpy</b>	Gallons Per Year
<b>GSA</b>	General Services Administration
<b>GTI</b>	Gas Technology Institute
<b>GVPD</b>	Global Vehicle Development Process
<b>H2</b>	Hydrogen
<b>HAN</b>	Home Area Network
<b>HC</b>	Hydrocarbon
<b>HCCI</b>	Homogeneous Charge Compression Ignition
<b>HCS</b>	Harmonic Compensated Synchronous Detection
<b>HD</b>	Heavy-Duty
<b>HDD</b>	Heavy-duty diesel
<b>HDV</b>	Heavy-Duty Vehicle
<b>HECC</b>	High Efficiency Clean Combustion
<b>HEV</b>	Hybrid Electric Vehicle
<b>HEXRD</b>	High-Energy X-Ray Diffraction
<b>HF</b>	Hydrofluoric acid
<b>HFPP</b>	Hexafluoro-iso-Propyl Phosphate
<b>HHV</b>	Hydraulic Hybrid Vehicle
<b>HK30-Nb</b>	A type of stainless steel alloy
<b>HNEI</b>	Hawaii Natural Energy Institute
<b>HPLB</b>	High-pressure, lean burn
<b>HSG</b>	Hybrid Starter Generator
<b>HSLA</b>	High Strength Low Alloy Steel
<b>HTML</b>	High Temperature Materials Laboratory
<b>HV</b>	High Voltage
<b>HVAC</b>	Heating Ventilating and Air Conditioning
<b>HWCVD</b>	Hot-Wire Chemical Vapor Deposition
<b>HX</b>	Heat Exchanger
<b>IACP</b>	International Association of Chiefs of Police
<b>IC</b>	Internal Combustion
<b>ICA</b>	Interface Control Additives
<b>ICE</b>	Internal Combustion Engine
<b>ICME</b>	International Computational Material Engineering
<b>ICTC</b>	Interstate Clean Transportation Corridor
<b>IEA</b>	International Energy Agency
<b>IEEE</b>	Institute of Electrical and Electronics Engineers
<b>IGBT</b>	Insulated-Gate Bipolar Transistor
<b>IL</b>	Ionic Liquid
<b>IIHS</b>	Insurance Institute for Highway Safety
<b>IMB</b>	Impedance Measurement Box
<b>INDOT</b>	Indiana Department of Transportation

Acronym	Definition
<b>INL</b>	Idaho National Laboratory
<b>IP</b>	Intellectual Property
<b>IPM</b>	Interior Permanent Magnet
<b>IR</b>	Infrared
<b>IRS</b>	Internal Revenue Service
<b>ISO</b>	International Organization for Standardization
<b>ITS</b>	Intelligent Transportation Systems
<b>JCI</b>	Johnson Controls, Inc.
<b>JFET</b>	Junction Gate Field-Effective Transistor
<b>JMI</b>	John Marvin, Inc.
<b>K</b>	Potassium
<b>K</b>	Temperature in degrees Kelvin
<b>KCFC</b>	Kentucky Clean Fuels Coalition
<b>KEMET</b>	KEMET Electronics Corporation
<b>Kg</b>	Kilogram
<b>KH-ACT</b>	Kelvin-Helmholtz-Aerodynamics Cavitation Turbulence model
<b>ksi</b>	Thousand pounds per Square Inch
<b>KW</b>	Kilowatt
<b>L</b>	Liter
<b>LBL</b>	Lawrence Berkeley National Laboratory
<b>LANL</b>	Los Alamos National Laboratory
<b>LBNL</b>	Lawrence Berkeley National Laboratory
<b>LCD</b>	Liquid Crystal Display
<b>LCO</b>	Lithium Cobalt Oxide (LiCoO <sub>2</sub> )
<b>LD</b>	Light-Duty
<b>LDD</b>	Light-Duty diesel
<b>LDV</b>	Light-Duty Vehicle
<b>LED</b>	Light-Emitting Diode
<b>LEESS</b>	Lower-Energy Energy Storage System
<b>LEM</b>	LEM, Inc.
<b>LES</b>	Large Eddy Simulation
<b>LFG</b>	Landfill Gas
<b>LFO</b>	Lithium Iron Oxide
<b>LFP</b>	Lithium Iron Phosphate
<b>LFT</b>	Long Fiber Thermoplastics
<b>LG</b>	LG Chem
<b>LH</b>	Long-Haul
<b>LHFZ</b>	Laser Heated Floating Zone
<b>LIB</b>	Lithium-Ion Battery
<b>LIE</b>	Long Island Expressway

Acronym	Definition
<b>LiBF4</b>	Lithium tetrafluoroborate
<b>LiBOB</b>	Lithium bis(oxalato)borate
<b>LiFOP</b>	Lithium tetrafluorooxalatophosphate $\text{LiPF}_4(\text{C}_2\text{O}_4)$
<b>LiFSI</b>	Lithium bis(fluorosulfonyl)imide
<b>LiMn2O4</b>	Lithium Manganese Oxide
<b>LiMO2</b>	Lithiated transition metal oxides
<b>Li2MnO3</b>	Lithiated transition metal oxides
<b>LiPF6</b>	Effective electrolyte salt for lithium-ion battery
<b>LiTFSI</b>	Lithium Bis(Trifluoromethanesulfonyl)Imide
<b>LLC</b>	Layered Lithium metal oxide Cathode
<b>LLFC</b>	Lean Lifted Flame Combustion
<b>LLNL</b>	Lawrence Livermore National Laboratory
<b>LMNO</b>	Ni-substituted manganese spinel oxides
<b>LMO</b>	Lithium Manganese Oxide
<b>LMP</b>	Lithium Metal Polymer
<b>LMR</b>	Lithium Manganese Rich
<b>LNG</b>	Liquid Natural Gas
<b>LNT</b>	Lean NOx Trap
<b>LPG</b>	Liquefied Petroleum Gas
<b>LSAM</b>	Lanthanum-aluminate based oxides
<b>LSM</b>	Lanthanum Strontium Manganite
<b>LTDI</b>	Lithium 4,5-dicyano-2-(trifluoromethyl)imidazole
<b>LTC</b>	Large Tapered Crystal
<b>LTC</b>	Low Temperature Combustion
<b>MAX</b>	Layered ternary carbides, nitrides, and carbonitrides consisting of “M”, “A”, and “X” layers
<b>MCMB</b>	Mesocarbon Microbeads
<b>MD</b>	Molecular Dynamics
<b>MD</b>	Medium-Duty
<b>MDV</b>	Medium-Duty Vehicle
<b>MECA</b>	Manufacturers of Emissions Control Association
<b>MEDC</b>	Michigan Economic Development Corporation
<b>MERF</b>	Materials Engineering Research Facility (Argonne National Lab)
<b>MENA</b>	Magnesium Electron North America
<b>MFERD</b>	Magnesium Front End Research and Development
<b>Mg</b>	Magnesium
<b>MgO</b>	Magnesium oxide or Magnesia
<b>MGI</b>	Materials Genome Initiative
<b>MIT</b>	Massachusetts Institute of Technology
<b>MLCC</b>	Multilayered Ceramic Capacitor
<b>MMLV</b>	Multi-Material Lightweight Vehicle
<b>Mn</b>	Manganese



Acronym	Definition
<b>Mo</b>	Molybdenum
<b>MO</b>	Carbon and oxides (MO=SiO, SiO <sub>2</sub> , SnO <sub>2</sub> , MoO <sub>3</sub> , GeO <sub>2</sub> )
<b>MOSFET</b>	Metal-Oxide-Semiconductor Field-Effective Transistor
<b>MOU</b>	Memorandum of Understanding
<b>MOxST</b>	Metal Oxygen Separation Technologies, Inc.
<b>MPG</b>	Miles Per Gallon
<b>MPGe</b>	Miles Per Gallon equivalent
<b>msi</b>	Million Pounds per Square Inch
<b>MSRP</b>	Manufacturer Suggested Retail Price
<b>MSU</b>	Michigan State University
<b>MSU</b>	Mississippi State University
<b>MV1</b>	A para-transport Vehicle Model
<b>MXene</b>	Exfoliated MAX phases (2D structures)
<b>MYPP</b>	Multiyear Program Plan
<b>N</b>	Nitrogen
<b>NAFTC</b>	National Alternative Fuels Training Consortium
<b>NASA</b>	National Aeronautical and Space Administration
<b>NBB</b>	National Biodiesel Board
<b>NCSU</b>	North Carolina State University
<b>NCA</b>	Battery cathode material (nickel cobalt aluminum oxide)
<b>NCM</b>	See NMC
<b>NDE</b>	Non-Destructive Evaluation
<b>NG</b>	Natural Graphite
<b>NEC</b>	Net Energy Change
<b>NEED</b>	National Energy Education Development
<b>NEG</b>	Nippon Electric Glass Co., Ltd.
<b>NEPA</b>	National Environmental Protection Agency
<b>NETL</b>	National Energy Technology Laboratory
<b>NEV</b>	Neighborhood Electric Vehicle
<b>NFC</b>	Novel Flux Coupling
<b>NFPA</b>	National Fire Protection Association
<b>NGV</b>	Natural Gas Vehicle
<b>NHTSA</b>	National Highway Traffic Safety Administration
<b>Ni</b>	Nickel
<b>NiMH</b>	Nickel-Metal Hydride
<b>NIST</b>	National Institute of Standards and Technology
<b>NMC</b>	Nickel Manganese Cobalt oxide
<b>NMP</b>	N-Methylpyrrolidone
<b>NMR</b>	Nuclear Magnetic Resonance
<b>NO</b>	Nitric Oxide
<b>NOx</b>	Oxides of Nitrogen

Acronym	Definition
<b>NO2</b>	Nitrogen Dioxide
<b>NREL</b>	National Renewable Energy Laboratory
<b>NTRC</b>	National Transportation Research Center
<b>NY</b>	New York
<b>NYC</b>	New York City
<b>NY-BEST</b>	New York Battery and Energy Storage Technology Consortium
<b>OCV</b>	Open Current Voltage
<b>OEM</b>	Original Equipment Manufacturer
<b>OH</b>	Hydroxide
<b>ORNL</b>	Oak Ridge National Laboratory
<b>OSC</b>	Oxygen storage capacity
<b>OTR</b>	Over The Road
<b>PACCAR</b>	Commercial Vehicle Manufacturer (Kenworth, Peterbilt, DAF)
<b>PAH</b>	Polycyclic Aromatic Hydrocarbon
<b>PAN</b>	Polyacrylonitrile
<b>PBA</b>	Planar Bond All
<b>PbSe</b>	Lead selenide or lead(II) selenide
<b>PC</b>	Propylene Carbonate
<b>PCB</b>	Printed Circuit Boards
<b>PCCI</b>	Premixed Charge Compression Ignition
<b>PE</b>	Polyethylene
<b>PED</b>	Power Electronic Device
<b>PEEM</b>	Power Electronics and Electric Machines
<b>PEI</b>	Polyethyleneimine
<b>PEO</b>	Polyethylene Oxide
<b>PEV</b>	Plug-in Electric Vehicle
<b>PF6</b>	Hexafluorophosphate
<b>PFOP</b>	Polyfluorene Polymer
<b>PGM</b>	Platinum group metal
<b>PHEV</b>	Plug-In Hybrid Electric Vehicle
<b>PHEV10</b>	Plug-In Hybrid Electric Vehicle with a 10-mile range on a single charge
<b>PHEV40</b>	Plug-In Hybrid Electric Vehicle with a 40-mile range on a single charge
<b>PI</b>	Principal Investigator
<b>PLC</b>	Programmable Logic Controller
<b>PLIF</b>	Planar Laser-Induced Fluorescence
<b>PLZT</b>	$Pb_{1-x}La_xZr_yTi_{1-y}O_3$
<b>PM</b>	Particulate Matter
<b>PM</b>	Permanent Magnet
<b>PM</b>	Project Manager
<b>PMEP</b>	Pumping mean effective pressure
<b>PNNL</b>	Pacific Northwest National Laboratory

Acronym	Definition
<b>POL</b>	Pilot Oxidation Line
<b>PP</b>	Polypropylene
<b>PPAP</b>	Production Part Approval Process
<b>PPC</b>	Partially premixed combustion
<b>PPG</b>	Pittsburgh Plate Glass Company
<b>Ppm</b>	Parts per Million
<b>PR</b>	Public relations
<b>PRIMET</b>	Primet Precision Materials, Inc.
<b>PS</b>	Polystyrene
<b>PSD</b>	Particle Size Distribution
<b>Pt</b>	Platinum
<b>PTC</b>	Positive Temperature Coefficient
<b>PUC</b>	Public Utilities Commission
<b>PV</b>	Photovoltaic
<b>PWB</b>	Printed Wiring Board
<b>QC</b>	Quality Control
<b>RCCI</b>	Reactivity Controlled Compression Ignition
<b>RCM</b>	Rapid Compression Machine
<b>R&amp;D</b>	Research and Development
<b>RE</b>	Rare Earth
<b>RF</b>	Radio Frequency
<b>RFID</b>	Radio Frequency Identification
<b>RFP</b>	Request for Proposal
<b>RFQ</b>	Request for Quotation
<b>RNG</b>	Renewable Natural Gas
<b>ROI</b>	Return on Investment
<b>ROMP</b>	Ring Opening Metathesis Polymerization
<b>RPI</b>	Rensselaer Polytechnic Institute
<b>RPM</b>	Revolutions Per Minute
<b>RS2</b>	Redox Shuttle-2
<b>RSW</b>	Resistance Spot Welding
<b>SA</b>	Spark assisted
<b>SACI</b>	Spark assisted compression ignition
<b>SAE</b>	Society of Automotive Engineers
<b>SANBAG</b>	San Bernardino Associated Governments
<b>Sb</b>	Antimony
<b>SBR</b>	Styrene Butadiene Rubber
<b>SCAQMD</b>	South Coast Air Quality Management District
<b>SCCI</b>	Stratified charge compression-ignition
<b>SCP</b>	Spherical Carbon Particles
<b>SCR</b>	Selective Catalytic Reduction

Acronym	Definition
<b>SEI</b>	Solid Electrolyte Interface
<b>SEM</b>	Scanning Electron Microscope
<b>SEO</b>	Poly(Styrene-block-Ethylene Oxide)
<b>SEO</b>	State Energy Office
<b>SES</b>	Triblock Co-polymers (polystyrene-block-polyethylene-block-polystyrene)
<b>Si</b>	Silicon
<b>Si3N4</b>	Silicon nitride
<b>SIC</b>	Single Ion Conducting
<b>SiC</b>	Silicon Carbide
<b>SI</b>	Spark ignition
<b>SIDI</b>	Spark Ignition Direct Injection
<b>SiO2</b>	Silicon Oxide
<b>SMC</b>	Sheet Molding Compound
<b>SMC</b>	Soft Magnetic Composites
<b>SME</b>	Subject Matter Expert
<b>Sn</b>	Tin
<b>SNL</b>	Sandia National Laboratory
<b>SOA</b>	State Of the Art
<b>SOC</b>	State Of Charge
<b>SOE</b>	State Of Energy
<b>SOFC</b>	Solid Oxide Fuel Cell
<b>soh</b>	State of Health
<b>SOIC</b>	Small Outline Integrated Circuit
<b>SOM</b>	Solid Oxygen Ion Membrane
<b>SOP</b>	Standard Operating Procedures
<b>SPS</b>	Strategic Polymer Sciences, Inc.
<b>SSRL</b>	Stanford Synchrotron Radiation Light Source
<b>SUNY</b>	State University of New York
<b>SW</b>	Software
<b>TCM</b>	Technical Cost Modeling
<b>TCO</b>	Total Cost of Ownership
<b>TCR</b>	Thermochemical Recuperation
<b>TE</b>	Thermoelectric
<b>TEG</b>	Thermoelectric Generator
<b>TEM</b>	Transmission Electron Microscope
<b>TFSI</b>	Bis(trifluoromethane)sulfonimide - [(CF3SO2)2N]-
<b>TGA</b>	Thermogravimetric analysis
<b>THF</b>	Tetrahydrofuran
<b>Ti2C</b>	Type of MXene (HF treated Ti2AlC)
<b>TM</b>	Transition Metal
<b>TMS</b>	Tetramethylsilane

Acronym	Definition
<b>TR</b>	Time-Resolved
<b>TRB</b>	Transportation Research Board
<b>TRU</b>	Trailer Refrigeration Unit
<b>TSFI</b>	Bis(trifluoromethane)sulfonimide [(CF <sub>3</sub> SO <sub>2</sub> ) <sub>2</sub> N]
<b>TTT</b>	3,5-triallyl-1-[1,3,5]triazinane-2,4,6-trione
<b>UCSD</b>	University of California San Diego
<b>UHC</b>	Unburned hydrocarbon
<b>UHEM</b>	Ultra-High Energy Ball Milling Machine
<b>UHMW</b>	Ultra-High Molecular Weight
<b>UK</b>	United Kingdom
<b>UK</b>	University of Kentucky
<b>UL</b>	Underwriters Laboratories
<b>ULSD</b>	Ultra-Low Sulfur Diesel
<b>UM</b>	University of Michigan
<b>UMTRI</b>	University of Michigan Transportation Research Institute
<b>UPA</b>	Unit Production per Annum
<b>UPS</b>	United Parcel Service
<b>UQM</b>	UQM Technologies, Inc.
<b>URI</b>	University of Rhode Island
<b>U.S. DRIVE</b>	U.S. Driving Research and Innovation for Vehicle Efficiency and Energy sustainability
<b>USABC</b>	U.S. Advanced Battery Consortium
<b>USAMP</b>	U.S. Automotive Materials Partnership
<b>USC</b>	University of Southern California
<b>USCAR</b>	U.S. Council for Automotive Research
<b>USPS</b>	U.S. Postal Service
<b>UTRC</b>	United Technologies Research Center
<b>UW</b>	University of Wisconsin
<b>UWM</b>	University of Wisconsin-Milwaukee
<b>V</b>	Volt
<b>VC</b>	Vinylene Carbonate
<b>VCT</b>	Variable camshaft timing
<b>V2I</b>	Vehicle-to-Infrastructure
<b>VDA</b>	Verband der Deutschen Automobilindustrie or Association of German Automobile Manufacturers
<b>VEHMA</b>	Vehma International
<b>VT</b>	Vehicle Technologies
<b>VTP</b>	Vehicle Technologies Program
<b>VVA</b>	Variable valve actuation
<b>VVT</b>	Variable valve timing
<b>W</b>	Watt
<b>WBG</b>	Wide Bandgap
<b>WEG</b>	Water Ethylene Glycol

Acronym	Definition
<b>WHR</b>	Waste Heat Recovery
<b>WM</b>	Waste Management
<b>WPT</b>	Wireless Power Transfer
<b>WVU</b>	West Virginia University
<b>XANES</b>	X-ray Absorption Near Edge Spectroscopy
<b>XAS</b>	X-ray Absorption Spectroscopy
<b>XPS</b>	X-ray Photoelectron Spectroscopy
<b>XRF</b>	X-Ray Fluorescence
<b>XRD</b>	X-Ray Diffraction (Crystallography)
<b>YSZ</b>	Yttria-Stabilized Zirconia
<b>YTZP</b>	Yttria-stabilized Polycrystalline Tetragonal Zirconia