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Nota di contenuto	Acknowledgments -- Introduction -- DOE focuses on developing materials to improve vehicle efficiency (2015-01-0405) -- MMLV: project overview (2015-01-0407) -- BIW design and CAE (2015-01-0408) -- MMLV: door design and component testing (2015-01-0409) -- MMLV: lightweight interiors systems design (2015-01-1236) -- MMLV: chassis design and component testing (2015-01-1237) -- MMLV: aluminum cylinder block with bulkhead inserts and aluminum alloy connecting rod (2015-01-1238) -- MMLV: carbon fiber composite engine parts (2015-01-1239) -- MMLV: automatic transmission lightweighting (2015-01-1240) -- MMLV: corrosion design and testing (2015-01-0410) -- MMLV: vehicle durability design, simulation and testing (2015-01-1613) -- MMLV: crash safety performance (2015-01-1614) -- MMLV: NVH sound package development and full vehicle testing (2015-01-1615) -- MMLV: life cycle analysis (2015-01-1616) -- MMLV project team.
Sommario/riassunto	The desire for greater fuel efficiency and reduced emissions have accelerated a shift from traditional materials to design solutions that

more closely match materials and their properties with key applications. The Multi Material Lightweight Vehicle (MMLV) Project presents cutting edge engineering that meets future challenges in a concept vehicle with weight and life-cycle assessment savings. These results significantly contribute to achieving fuel reduction and to meeting future Corporate Average Fuel Economy (CAFE) regulations without compromising vehicle performance or occupant safety. The MMLV Project presents: Lightweight materials applications; Body in white design and computer aided engineering; Engine and transmission design and lightweighting; Full vehicle test results that are specific to the MMLV subsystems including crash, corrosion, durability and Noise Vibration and Harshness (NVH); The Life Cycle Analysis (LCA) for the MMLV.