

## 차세대 자동차 개발과 재료기술

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### **The Trend of Materials Technology in New Generation Vehicles**

**Abstract** : Recently social demand to achieve low fuel consumption and clean emission requires the development of new generation vehicle beyond the conventional vehicle concept. In this point, new generation vehicle is newly designed as electric vehicle, hybrid electric vehicle, fuel cell electric vehicle or 3 liter car etc. In order to develop new generation vehicle, it is very important to develop new materials and process technologies now. In this paper these new technologies are presented focusing on weight reduction specially. Steel body can be achieved 20-25% weight reduction by adoption of high strength steel and new process technologies, i.e tailored blank and hydroforming. Aluminium body can be achieved 40-50% weight down by use of all aluminium monocoque body or aluminium space frame with aluminium panel. Plastic composite body can be achieved 30% weight reduction comparing with conventional steel body.