

Abstract:

This work discusses one of the main future challenge in automotive materials addressing the integration of functionalities, as embedded electronic into materials.

The car of the future will have an elegant and ergonomic design with embedded sensors, touch surfaces and biomimetic multi-colored components. Cars will be made more functional and will be based on materials that are more intelligent: dashboards, central consoles, knobs, panels, seats, ceilings, armrests and kick plates. Novel processes and materials that are more intelligent and customized will make all.

All the manufacturing phases necessary for successful integration will be evaluated regarding the materials and processes as well.

Our cars are more and more similar to mobile phone, laptop, big battery as well as house sofa. So on board connection, infotainment, entertainment, intelligence and autonomy are becoming fundamental demands in vehicles. This implies a continuous increase of electronics contents with consequent rise in complexity of component' design and manufacturing.