

Topics

Future Trends in the Automotive Industry and Expectations

- Political framework conditions and mobility trends
- Legal and normative framework worldwide; regulations and standards
- Requirements of the markets
- Sustainability of materials, products and processes
- Life cycle assessment (LCA), recycling management
- Availability of materials in the supply chain
- Digitalization of products, processes and logistics

Integration and Product Solutions

- Modular integration of energy storage systems / cleaning systems / thermal management systems
- Energy storage concepts for passenger cars and commercial vehicle applications
- Innovative system concepts (e.g. cleaning without water; hydrogen storage in the battery assembly area)
- Interfaces to the charging infrastructure (incl. hydrogen), charging interface
- New filling options for cleaning products

Architecture and Functionalities of Mechatronic Components

- Sensors and actuators
- Pumps
- Heating systems
- Valves
- Filters
- Control and diagnostic systems
- etc. ...

Development and Manufacturing Methods, Processing and Application Examples, Testing

- Development methodology from simulation to testing
- Digitalization of manufacturing
- Materials
- Challenges in the supply chain
- Prototyping (e.g. additive manufacturing)

Infrastructure for Storage and Distribution

- Global trends and local availability
- Refuelling and charging facilities
- Thermal management for fast charging

Areas

1. Tank systems for e-fuels and biofuels as well as fossil fuels for applications in combustion engines and hybrid vehicles; SCR systems
2. Tank systems for hydrogen (gaseous and liquid)
3. Battery enclosures / energy storage enclosures for electrified vehicles and their thermal management systems (without battery cell)
4. Active cleaning systems (camera and sensor cleaning systems e.g. for autonomous driving)