

Association for European NanoElectronics Activities



E³Car

Think
Green

Nanoelectronics for an Energy Efficient Electrical Car



Project objective - development of nanoelectronics technologies, devices, circuits architectures and modules for electrical and hybrid vehicles and demonstration of these modules in final systems.

Design and concepts - power train, power conversion, power management and battery management. Fail safe and fault tolerant systems.

Methods and technologies - improved reliability and increased lifetime.

Power and high voltage electronics and smart miniaturized systems - power management, engine control and energy recovery systems.

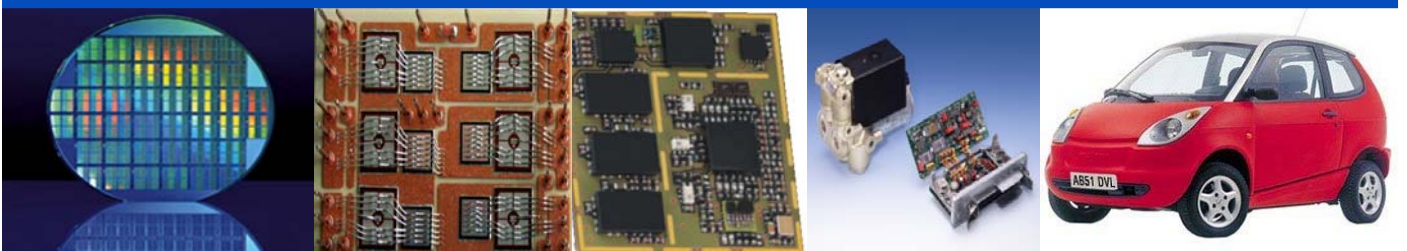
Research activities - MOS/DMOS/IGBT technologies.

Contact:

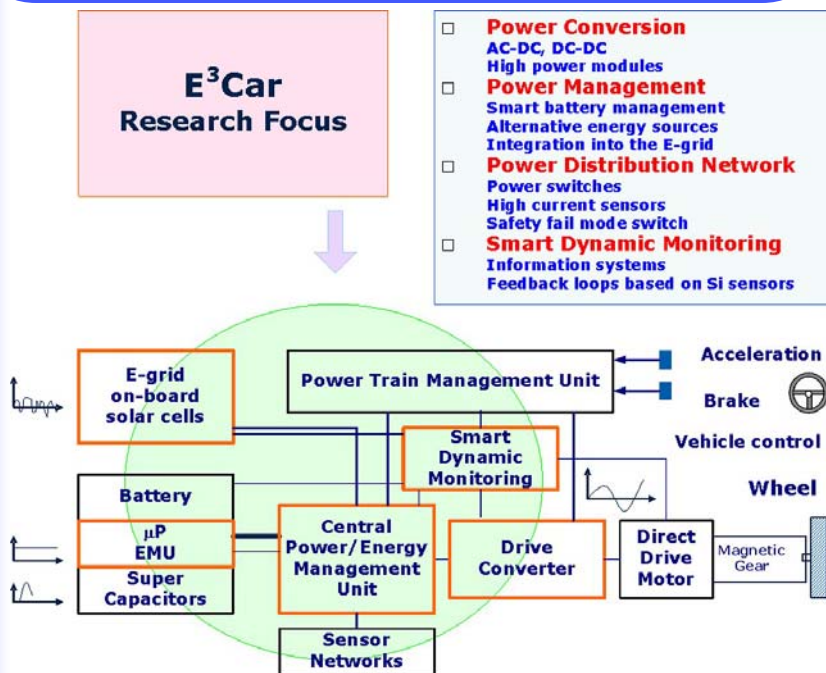
Reiner.John@infineon.com
Ovidiu.Vermesan@sintef.no

Project website:

www.e3car.eu



Project Profile



Smart power technologies for energy management
High power technologies e.g. for electrical and hybrid vehicles based on **heterogeneous technologies** (Si, SOI, SiC, GaN)

Sensor and **actuator** components and systems based on **heterogeneous substrates and functionalities**

Smart packages and **high power modules** for heterogeneous integration with extended power dissipation

Reliability, quality and test on component and system level under **harsh conditions** (prediction, EMI, radiation, parasitics).



E³Car

Partners

Alcatel Thales III-V Lab, France
 ATMEL Automotive, Germany
 ATMEL, France
 Audi Electronics Venture, Germany
 austriamicrosystems, Austria
 BUT, Czech Republic
 CEA, France
 CiDETEC, Spain
 CISC Semiconductor, Austria
 CSIC-CNM, Spain
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 SINTEF, Norway
 ST Microelectronics, France
 ST Microelectronics, Italy
 Technische Universität Wien, Austria
 Tyndall National Institute, Ireland
 Think Global, Norway
 Valeo Etudes Electroniques, France
 VTI, Finland
 VTT, Finland

Countries involved

Austria
 Belgium
 Czech Republic
 Finland
 France
 Germany
 Ireland
 Italy
 Nederland
 Norway
 Spain

Application areas

Semiconductor
 Automotive
 Industrial