



The European Materials Modelling Council

VUB/MOBI – NMBP-09-2018 project idea

Accelerating the uptake of materials modelling software (IA)

Coordinator:

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VRIJE
UNIVERSITEIT
BRUSSEL

Subject:

Batteries for Electric Vehicles

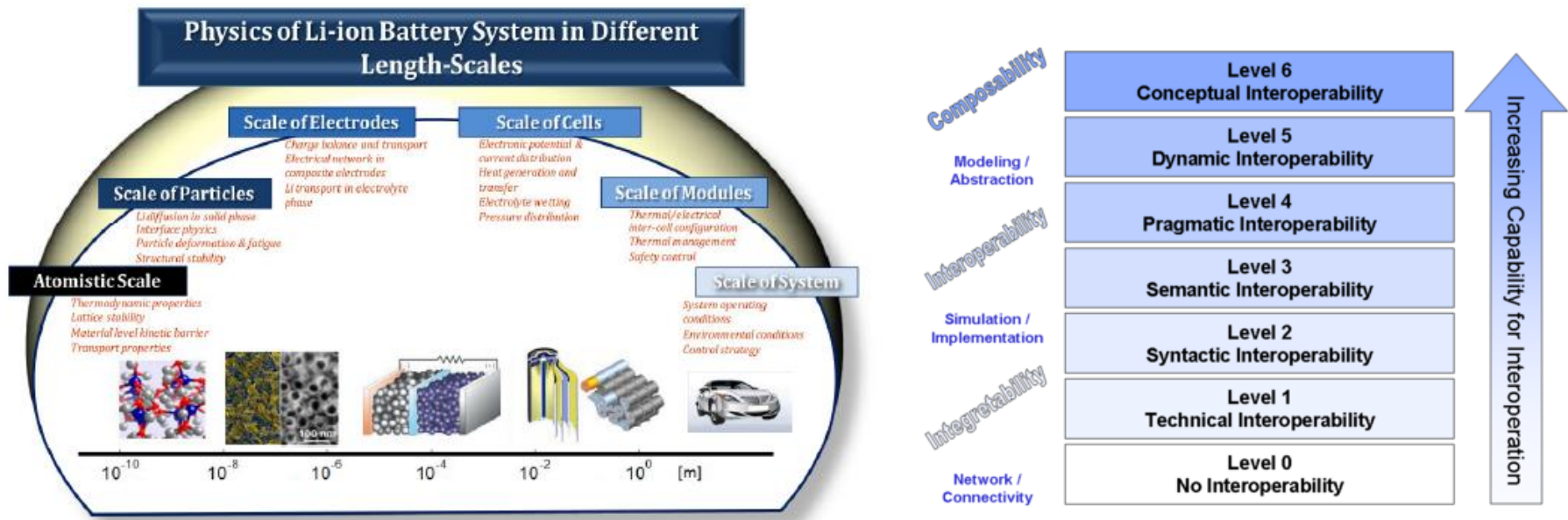


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Main Objectives:

- Material and cell-design dependent battery modelling approach and solutions for battery electric vehicles.
- Interoperability of all developed simulation models (atomistic, physics based, thermal, electrical, mechanical) and tools from material to system level



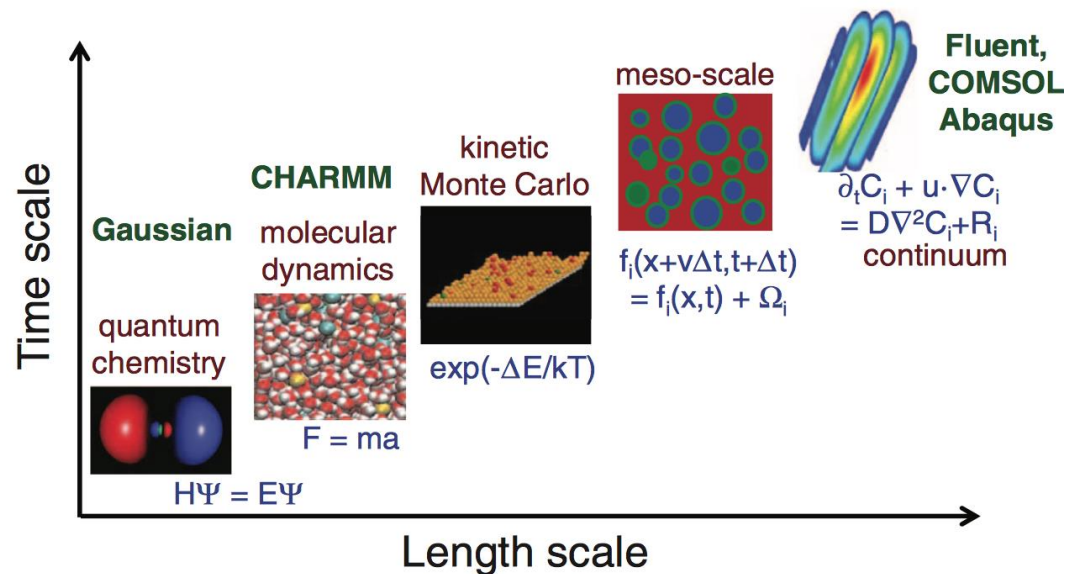


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Innovative Aspects:

- Advanced, accurate and reliable types of models at different scale level
- Adaptable to characterization techniques like SEM, CT etc to have real understanding of the electrode architecture rather than simple meshing techniques.
- Robust parameter identification techniques
- Interoperable solutions between different models and software tools





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Expected Outcome:

- Material database on different battery technologies
- Advanced and interoperable simulation tools towards TRL 7.

Expected Impact:

- Reduction of the development cost and effort
- Stronger position for EU software industry
- Scalable solutions from materials to system level



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Identified Partners:

Vrije Universiteit Brussel (VUB) Coordinator

CIC Energigune (Spain)

Université de Picardie Jules Verne (France)

CEA (France)

Karlsruhe Institute of Technology (KIT) (Germany)

Ansys (Belgium)

HILTI (Switzerland)

Renault (France)

Siemens Software Industry (France)

Varta MicroBattery (Austria)

Geodict (Germany)

Quantumwise (Switzerland)

Missing Partners:

Industrial Software Companies