UNIVERSITÀ di VERONA

Scuola di Dottorato
di **SCIENZE NATURALI E INGEGNERISTICHE**

Corso di Dottorato in Nanoscienze e tecnologie avanzate

"Solid electrolytes, e-mobility and everything"

June 27, 2017 - h. 14.30

Dr. Frank Tietz

Team leader of Materials Development
Forschungszentrum Jülich GmbH

Abstract:

Since 2009 solid electrolytes and solid state batteries are developed at Forschungszentrum Jülich, initially with the aim to support the German industry in establishing electro-mobility, now with the purpose to develop safe and reliable battery storage systems for stationary applications.
In the seminar, first a short summary of actual research activities and highlights are presented, then other electrochemical systems than lithium-ion batteries will be reviewed, wich have been developed close market entry for mobile applications.
Finally, expectations from industry regarding the future progress of various traction systems, i.e. Combustion engines, hybrids and electric vehicles, are converted to predict the market share of electric cars on the global market until 2050.
The associated shortage of petrol and other future trends related to energy supply, population growth and environmental issues will be discussed.

Bio sketch of Dr. Frank Tietz

Frank Tietz is senior scientist at Forschungszentrum Jülich GmbH and is the head of the group "functional materials" at the Institute of Energy and Climate Research (IEK-1).
He has worked on a wide variety of ceramic materials, at both fundamental level and technology development.
During more than 20 years in science, he worked on superconductors, cationic and anionic conductors, semiconducting ceramics as well as composite materials.
Besides generic solid state phenomena, most of the materials development was related to solid oxide fuel cells.
Between 1997 and 2013 he acted as referee for national solid oxide fuel cell programmes in New Zealand, Great Britain and Canada and was member of the advisory board of the SOFC Canada Network.
Since 2009 he is working on materials for solid state batteries and is additionally affiliated with the Helmholtz-Institute Münster "Ionics in Energy Storage".

The lecture will take place at 14.30 – Sala Verde – Cà Vignal – Strada Le Grazie, 15

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