

3rd COSY Young Researchers Workshop
**“Functional Materials for Energy Applications:
Beyond Solid State Hydrogen Storage”**

9-10.06.2010, IFW-Dresden, Germany

I. Context of the COSY Project

Human development over the past centuries has resulted – apart from a depletion of natural energy resources – in global warming and climate changes with non-predictable consequences. National and intergovernmental panels urgently recommend mandatory reductions of emission of polluting gases from industrial and transport activities. Even if the concrete scenario is not yet fully clear, it is conceivable that classical energy carriers – carbon hydrides – have to be replaced and the within connected technologies - today’s guarantee for welfare - will wither. That means that apart from the duty of mankind to soften the above mentioned ecological consequences, we will have to develop new scientific and technological knowledge to lay the basis of our future economy.

Most promising future scenario is the hydrogen economy. Hydrogen is the ideal means of energy storage, transportation and conversion in a comprehensive clean-energy concept. It is non-polluting as its combustion only generates water. It is abundant and can be produced from a variety of conventional and renewable energy resources. These are the main reasons, why there is now widespread agreement that hydrogen will play a key role in the European Union’s energy policy towards the middle of the century.

II. Scope of the Workshop

The Marie Curie Research Training Networks aim to cross link research teams of recognised international stature in the context of a well-defined collaborative research project, in order to implement a structured training programme for researchers. Networks will provide a cohesive framework for the training and professional development of early stages researchers.

COSY Project fellows organize by themselves every year a Young Researchers Workshop in order to implement their soft skills and improve the knowledge on energy related topics.

The workshop wants to gather experienced scientists with early stage researchers to discuss new results and ideas on cutting edge topics concerning energy and technological application advances.

III. Final Agenda

<u>Tuesday, June 8th, 2010</u>		
7.30 p.m.	<u>Get Together (Biergarten)</u>	
<u>Wednesday, June 9th, 2010</u>		
	<u>Morning Session:</u>	<u>COSY 3rd YRW</u> <u>IFW room A2E.16</u>
9.00 a.m.	Welcome	O. Gutfleisch (IFW – Dresden)
9.15 a.m.	Introduction to Energy issues	O. Gutfleisch (IFW – Dresden)
10.00 a.m.	Magnetic Refrigeration	J. Moore (IFW – Dresden)
10:45 a.m.	Coffee Break	
11.00 a.m.	Functional Magnetic Materials for Energy Applications	O. Gutfleisch (IFW – Dresden)
11.45 a.m.	Thermoelectrics	J. Schmidt (Fraunhofer - IFAM)
12.30 a.m.	<u>Lunch</u>	IFW cafeteria
	<u>Afternoon Session</u>	<u>COSY 3rd YRW</u> <u>IFW room A2E.16</u>
1.45 p.m.	NMR for Li-ion Batteries	H. J. Grafe (IFW – Dresden)
2.30 p.m.	Li-ion Batteries	A. Rougier (CNRS - Amiens)
2.45 p.m.	Coffee Break	
3.00 p.m.	Ni-MH Batteries	A. Rougier (CNRS - Amiens)
3.30 p.m.	Visit to the laboratories	
5.00 p.m.	Tentative end of the session	
7:30 p.m.	<u>Social Event</u>	<u>Dinner</u>

Thursday, June 10th, 2010**Morning Session:****COSY 3rd YRW**
IFW Lecture hall

09.30 a.m.	SOFC (Solid Oxide Fuel Cells)	M. Stelter (Fraunhofer - IKTS)
10.15 a.m.	Organic Solar Cells	D. Ray (IAPP – TU-Dresden)
11.00 a.m.	<u>Coffee Break</u>	
11.20 a.m.	COSY Internal discussion	(COSY Fellows only)
12.30 a.m.	<u>Lunch</u>	IFW cafeteria

End of the COSY 3rd YRW