

XERIC's European adventure well on its track!

Welcome to the third XERIC newsletter.

We're half-way through XERIC's journey: we have just concluded the third semester of activities of a very challenging scientific and technological adventure related to electric vehicles. XERIC has taken up the challenge of extending the range of electric vehicles by developing a **novel climate control system**.

The climate control system adds an original desiccant cycle to a traditional vapour compression cycle (VCC). In detail, the desiccant cycle is based on an innovative component, specifically designed within the XERIC project and called **three-fluids combined membrane contactor (3F-CMC)**, that simultaneously works with air, desiccant solution and refrigerant. One important part of the 3F-CMC is the **semi-permeable membrane** that lets water vapour to pass through (thus dehumidifying the air) while preventing the liquid water (the desiccant is indeed an aqueous solution) to go in the reverse direction. Our aim is to develop a **Polyvinildene fluoride membrane by using ecofriendly manufacturing technologies** and upgrade its already high hydrophobicity by a treatment based on indirect plasma. The novel climate control system will be completed by the use of **an innovative electronic control system**, which we are also developing. Moreover, the VCC can operate also as a heat pump through a 4-way valve, allowing for both cooling and heating of air.

XERIC is keen on promoting synergy by **clustering** with other EC-funded projects: the JOSPEL and OPTEMUS European projects contributed to a one-day workshop devoted to improving energy efficiency in electric vehicles. This first joint public event took place on November 24, 2016 in Bologna, Italy. More than **100 participants** from all over Europe got a unique insight into the latest research and development on energy management in electric vehicles and grew their network.

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Save the date:

A new get-together is already in sight. XERIC, OPTEMUS and JOSPEL will organize a second workshop in the framework of EVER2017, a Conference that will take place in Monaco, FR on April 11-13, 2017.

In this edition of our newsletter, you'll also get a **glimpse into the daily working life** of Bernardo Cerrai from Frigomar and Federica Boero from TICASS, two of the researcher involved in XERIC.

On behalf of the XERIC partners, I am glad to report that we are strongly committed to **creating new intellectual and material know-how** for the reduction of energy consumption for heating, ventilation and air conditioning in electric cars, and in general in air-conditioned environments.

We welcome any comments or suggestion from all people interested in our project and we invite you to read more about it on our website: www.xeric.eu.

We hope you enjoy this issue.

Nino Gaeta
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XERIC's Coordinator

