

# Technical FP7 INFORMATION DAYS for Transport Research

## Project ideas of applicants

<b>Topic</b>	<b>Fuel cells and fuel cartridge for thermal management</b>
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<b>Project idea, objectives, ...</b>	<p>The main aim of the project is increasing of the efficiency of modern power sources in transport on the base of development of original types of Heat Pipes (HP) and Solid Sorption Coolers and demonstration of prototypes for thermal management.</p> <p>Potential applications of HPs for fuel cells (FC) in thermal management include also systems of heat recovery and fuel cartridges. Thermal link between FC stack and fuel cartridge, or between FC stack and energy recovery system (Heat pump, Cooler) can be efficiently performed by HP heat exchangers. Cylindrical configuration of micro/mini FC is convenient for applying of mini loop HP and annular HP having mini/micro-channels as FC thermal control system. Sorption heat pipes (SHP) are to be used for FC thermal and water transport control in active mode, when it is necessary.</p> <p>We are looking for Coordinator, scientists (Universities, Research Centers) and SMEs interested in development of these approaches with the aim of further cooperation and participating in FP7 proposal.</p> <p><b><u>Recent publications on the topic:</u></b></p> <ol style="list-style-type: none"> <li>1. L.L. Vasiliev and L.L. Vasiliev Jr. , Heat Pipes to increase the efficiency of fuel cells, Int. Journal of Low-Carbon Technologies, 4, No.2, (2009), 96-103</li> <li>2. L.L. Vasiliev, Heat pipes in modern heat exchangers, Applied Thermal Engineering, 25 (2005), 1-19</li> <li>3. L. Vasiliev and L. Vasiliev Jr., Sorption heat pipe-a new thermal control device for space and ground application, Int. Journal of Heat and Mass Transfer 48 (2005) 2464-2472</li> </ol>