

# MATERIALS AND PROCESSES FOR HYDROGEN COMPONENTS

Programme prévisionnel

Registration and more information on [https://events.femto-st.fr/H2\\_SummerSchool\\_Besancon2022/en](https://events.femto-st.fr/H2_SummerSchool_Besancon2022/en)

Title	Materials for use in severe hydrogen environments			
Day	5th July	6th July	7th July	8th July
8:30 AM	Welcome	<b>Professor Christine BLANC</b> Aluminium alloys and hydrogen embrittlement  <b>Ass. professor Grégory ODEMER</b> Effect of hydrogen on the mechanical and electrochemical properties of a nickel-based superalloy	<b>FEMTO ST Laurent LARGER</b> Presentation of the Institute	<b>IR CEA HDR Olivier GILLIA</b>  Hydride breathing and its mechanical consequences on the tank
9:00 AM	IUT Anne-Laurence FERRARI <hr/> IUT/FEMTO ST Anne MAYNADIER & David CHAPELLE		<b>CEA Laurent BRIOTTET</b>  Hydrogen fracture of metal alloys in a gaseous environment	
9:30 AM				
10:00 AM	<b>COFFEE BREAK</b>			
10:30 AM	<b>Pierre SERRE-COMBE &amp; Thierry PRIEM</b> CEA	<b>COFFEE BREAK</b>		
11:00 AM	On the road to hydrogen	<b>CEA Thierry LAGUIONIE</b>  Manufacturing processes for type IV gaseous hydrogen vessels	<b>Hugo FARIA</b> Invited Lecturer (University of Aveiro)	<b>DR CNRS Patricia DE RANGO</b>
11:30 AM	<b>Professor Dominique PERREUX</b>		(to be completed)	(to be completed)
12:00 PM	From the lab to the MAHYTEC adventure			
12:30 PM	<b>LUNCH</b>			
1:30 PM	<b>Professor Jean-François GERARD</b>  Polymers for production, transport, storage, and conversion of hydrogen: A review of considered polymers and shaping processes'	<b>DR CNRS Fermin CUEVAS</b>  Fundamental properties of metal hydrides for reversible storage at room temperature; applications to solid gas storage for Fuel Cell application and electrochemical storage for Ni-MH battery application.	Workshop I et II	<b>Ass. Professor Yann CHARLES</b>  Implementation of finite element simulations of hydrogen transport and trapping in metallic structures under complex thermomechanical loading
2:00 PM				
2:30 PM				
3:00 PM	<b>COFFEE BREAK</b>			
3:30 PM	Poster Session I	Poster Session II	Workshop II et I	Closure Poster Rewards
4:00 PM				
4:30 PM				
5:00 PM				