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2021 WORLD FUEL CELL CONFERENCE

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Name	ANTONI	
Affiliation	CEA Liten, France; President, Hydrogen Europe Research	
Invited Plenary Lecture		
Presentation Title	High temperature electrolysis and alternative fuel feeding strategy and architecture of PEM Fuel Cell Stack to improve performance and stability while reducing costs of hydrogen production and usage	
Abstract (Approximately 200 words)	<p>The potential of hydrogen is being recognized worldwide, with strategies, plans and investments by government and industry ramping up in many countries, in particular in Europe. The year 2020 has seen the emergence of hydrogen strategies in many European countries and for EU as a whole. The European Hydrogen Strategy sets out an ambitious vision of how Europe can turn clean H₂ into a viable solution to decarbonize different sectors over time. Over the past decades, owing to a continuous European support to research, development and innovation, hydrogen technologies have transitioned from highly specialized applications to commercially available products, in particular owing to strong public-private partnerships. These private-public partnerships have been ensuring coordinated activities based on a common understanding and vision of the European industry represented by Hydrogen Europe, the European research represented by Hydrogen Europe Research and the European Commission. After presenting the main European objectives for the next decade, a focus will be given on the remaining research challenges with an illustration of CEA's contribution with its activities on high temperature electrolysis, alternative fuel feeding strategy and architecture of PEM Fuel Cell Stack to improve performance and stability while reducing costs of hydrogen production and usage.</p>	
Biographical Sketch (Approximately 200 words)	<p>Dr. Laurent Antoni is Public Affairs manager for hydrogen technologies at CEA Liten. He gained his Engineering degree in 1992 and started his career as a senior scientist on material sciences at Mittal Group (Arcelor). In 2003, he joined the CEA, a Public Research Institute with a mandate to develop metallic bipolar plates for fuel cells. In 2005, he was nominated Head of the Hydrogen and Fuel Cell Laboratory at the CEA and managed a team to intensify R&D activity on hydrogen and fuel cells. In 2013, he was nominated Division Manager with 180 permanent staff to develop battery and fuel cell technologies for transportations through an integrated approach from materials up to demonstrators using technological platforms to enhance technological transfer to industry. Laurent Antoni is since 2016 President of Hydrogen Europe Research, the European research association on hydrogen and fuel cells gathering more than 90 universities and research institutes, member of the Governing Board of the European Fuel Cells and Hydrogen Joint Undertaking (FCH 2 JU). He is also President of the Technical Committee of Fuel Cells at the International Electrotechnical Commission (IEC/TC105) and a national representative in different working groups of international organizations (IEA Advanced Fuel Cells, IEA Hydrogen TCP, International Partnership for Hydrogen and fuels cells in the Economy - IPHE). He contributes to several peer reviewed books and publications.</p>	