



EUROPEAN  
COMMISSION  
DIRECTORATE-GENERAL JRC  
JOINT RESEARCH CENTRE  
Institute for Energy and Transport



ICE-HT/FORTH  
Institute of Chemical  
Engineering Sciences  
Foundation for Research &  
Technology, Hellas

# 3<sup>rd</sup> INTERNATIONAL WORKSHOP ON DEGRADATION ISSUES OF FUEL CELLS and ELECTROLYSERS

## SECOND ANNOUNCEMENT

Joint Research Centre



**Dates: 29 SEPTEMBER – 1 OCTOBER 2015**

**Location: Santorini, Greece**

<http://3degis.iceht.forth.gr>



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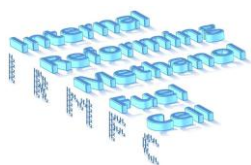
The Workshop is supported by the following  
FCH-JU Projects.

CATHCAT

CathCat



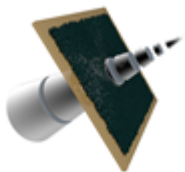
DeMStack



IRMFC



T-Cell



IMPACT



IMPALA



Second Act

## OTHER SUPPORTING ORGANISATIONS



Advent



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## SCOPE OF THE WORKSHOP

This international workshop aims at:

- Understanding fundamental degradation mechanisms in a stack and MEA level.
- Identifying measures or development of materials that overcome current limitations toward the increase of lifetime, robustness and reliability.
- Identifying test procedures, characterization tools & test criteria to address degradation from the fuel cell component the MEA (membrane electrode assembly) to the system level both applicable for fuel cell and electrolysis.
- Providing a model based approach to describe degradation phenomena.
- Identifying future R&D (research & development) activities for further understanding, mitigating and reducing degradation phenomena.
- Identifying methodologies for evaluation of degradation and harmonisation of test procedures.

The workshop will be comprised of plenary and parallel sessions with oral presentations, which will include state of the art reviews on degradation issues on fuel cells such as Polymer Electrolyte Fuel Cell (PEFC); Solid Oxide Fuel Cell (SOFC) and in electrolysis mode, Polymer Electrolyte Membrane Water Electrolysis Cell (PEMWE) and Solid Oxide Electrolysis Cell (SOEC). Oral presentations at the workshop are by invitation only from the committee. A selection of international experts will chair and guide the sessions. Additionally, a poster exhibition will be organised offering the opportunity to the participants, to present their research work on degradation issues. A panel discussion session will close the workshop, and will suggest future directions in fuel cell degradation research.

### WHO SHOULD ATTEND

The workshop is targeted at Developers, Researchers, Business Managers in academia and industry, graduate and post graduate students.



## VENUE

The venue of the Workshop will be in Santorini, Greece (<http://www.santorini.gr/>).



Petros M. Nomikos Conference Centre (<http://www.thera-conferences.gr/>) is a neoclassical mansion located in the capital of Santorini, Fira, overlooking the caldera and the volcano. Its characteristic red colouring has been transformed into a modern, operational Conference Centre, preserving its traditional character with its cellars, terraces, pots filled with flowers and parterres.



## SCIENTIFIC PROGRAM

	Tuesday 29 September 2015		Wednesday 30 September 2015			Thursday 1 October 2015		
09:00	Morning Sessions Plenary		Morning Sessions Parallel			Morning Sessions Parallel		
	International Overview		Parallel Session 1 PEFC	Parallel Session 2 SOFC	Parallel Session 3 PEMWECElectrolysis	Parallel Session 1 PEFC	Parallel Session 2 SOFC	Parallel Session 3 High Temperature Electrolysis
			Approaches limiting cell components degradation Membrane	Approaches limiting cell components degradation	Mechanisms limiting PEMWECE durability	Effects of Contaminants	System durability	Fundamental mechanisms limiting Durability & Performance
10:45	Coffee break		Coffee break			Coffee break		
11:00	Parallel Session 1 PEFC	Parallel Session 2 SOFC	Catalyst Degradation	Approaches limiting cell components degradation	Degradation of PEMWECE cells and stacks	Modelling Approaches for Degradation	Accelerated testing	Fundamental mechanisms limiting Durability & Performance
	Fundamental mechanisms limiting PEFC Durability & Performance	Fundamental mechanisms limiting SOFC Durability & Performance						
12:30	Lunch		Lunch			Lunch		
14:00	Afternoon Parallel Sessions		Afternoon Parallel Sessions			Afternoon Plenary Session		
	Parallel Session 1 PEFC	Parallel Session 2 SOFC	Parallel Session 1 PEFC	Parallel Session 2 SOFC	Parallel Session 3 Alkaline Electrolysis	Plenary Discussions		
	Fundamental mechanisms limiting PEFC Durability & Performance	Fundamental mechanisms limiting SOFC durability & Performance	Degradation at cell and stack level at load cycling	Degradation at cell and stack level	Degradation mechanisms for Alkaline electrolysis			
16:00	Coffee break		Coffee break			End of Workshop		
16:15	Fundamental mechanisms limiting PEFC Durability& Performance	Fundamental mechanisms limiting SOFC durability& Performance	Endurance Testing Procedures	Endurance Testing	Degradation at cell and stack level			
18:00	End of Day 1		End of Day 2					



## WORKSHOP PROCEEDINGS

All abstracts from oral and poster presentations will be published as the Workshop Proceedings.

## DEADLINES

ABSTRACTS for POSTER and ORAL PRESENTATIONS can be submitted via e-mail by 30<sup>th</sup> June 2015 to:

PEFC to: [ludwig.joerissen@zsw-bw.de](mailto:ludwig.joerissen@zsw-bw.de)

SOFC to: [Robert-steinberger-wilckens@bham.ac.uk](mailto:Robert-steinberger-wilckens@bham.ac.uk) ; [A.El-kharouf@bham.ac.uk](mailto:A.El-kharouf@bham.ac.uk)

Low Temperature Electrolysis to: [nvd@itm-power.com](mailto:nvd@itm-power.com) ; [arico@itaecnr.it](mailto:arico@itaecnr.it)

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[3degis@iceht.forth.gr](mailto:3degis@iceht.forth.gr)

## PARTICIPATION TO THE WORKSHOP

Interested persons should submit the Registration form online:  
<http://3degis.iceht.forth.gr>

The participation fee of €400 (€300 for students) includes meals, coffee breaks, gala dinner and conference proceedings.

For any further inquiries you can contact us via e-mail to:  
[3degis@iceht.forth.gr](mailto:3degis@iceht.forth.gr)

## ORGANISING SCIENTIFIC COMMITTEE

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