

# Sunday 19 June 2011

**18:00**    **Registration Desk**  
Pre - Registration

**18:00**    **Welcome Party**

ICH2P-11 PROGRAM OVERVIEW

# Monday 20 June 2011

- 8:30 Registration Desk**  
Registration
- 8:45 Auditorium "Vergina"**  
Opening Ceremony
- 9:00 Auditorium "Vergina"**  
**Plenary lecture by Prof. Ibrahim Dincer**  
Sustainable Hydrogen Production Options and the Role of IAHE

9:50		
<b>Auditorium "Vergina"</b> Hydrogen aspects and steam reforming	<b>Room 1 "Aiolos"</b> Electrolysis, electrochemical reactors and fuel cells	<b>Room 2 "INA"</b> Novel hydrogen storage technologies

**11:10 Coffee Break and Exhibition**

11:30		
<b>Auditorium "Vergina"</b> Thermochemical cycles	<b>Room 1 "Aiolos"</b> Electrolysis, electrochemical reactors and fuel cells	<b>Room 2 "INA"</b> Photocatalytic processes

**12:50 Lunch Break**

- 14:30 Auditorium "Vergina"**  
**Plenary lecture by Prof. Anastasios Melis**  
Photosynthesis for Hydrogen and Fuels Production

15:20		
<b>Auditorium "Vergina"</b> Biomass and biological hydrogen production	<b>Room 1 "Aiolos"</b> Thermochemical cycles	<b>Room 2 "INA"</b> Conventional hydrogen production processes

**16:40 Coffee Break and Exhibition**

17:00		
<b>Auditorium "Vergina"</b> Biomass and biological hydrogen production	<b>Room 1 "Aiolos"</b> Hydrogen aspects and steam reforming	<b>Room 2 "INA"</b> Novel hydrogen storage technologies

- 18:30 Room "Zefyros"**  
Executive Committee meeting of EHA
- Room 1 "Aiolos"**  
Executive Committee meeting of the Nuclear Hydrogen Division of IAHE

# Tuesday 21 June 2011

**8:30 Registration Desk**  
Registration

**9:00 Auditorium "Vergina"**  
**Plenary lecture by Prof. Tatsuya Kodama**  
High-temperature Solar Thermochemical Hydrogen Production

9:50		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Solar hydrogen/Fuels production systems	Electrolysis, electrochemical reactors and fuel cells	Biomass and biological hydrogen production

**11:10 Coffee Break and Exhibition**

11:30		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Solar hydrogen/Fuels production systems	Electrolysis, electrochemical reactors and fuel cells	Biomass and biological hydrogen production

**12:50 Lunch Break**

14:30		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Thermochemical cycles	Hydrogen Life Cycle Analysis/Feasibility studies	Hydrogen perspectives from government and industry

15:40		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Conventional hydrogen production processes	Hydrogen in vehicles	Hydrogen perspectives from government and industry

**16:40 Coffee Break and Exhibition**

17:00		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Conventional hydrogen production processes	Hydrogen in vehicles	Hydrogen from renewables

**18:00 Exhibition and Poster area**  
Poster Session

**20:00 Conference Dinner**  
Speech given by Prof. Xenophon Verykios

# Wednesday June 22, 2011

**8:30 Registration Desk**  
Registration

**9:00 Auditorium "Vergina"**

**Plenary lecture by Prof. Maria Flytzani-Stephanopoulos**

Highly efficient production of hydrogen with novel catalysts containing only trace amounts of precious metals

9:50		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Hydrogen aspects and steam reforming	Electrolysis, electrochemical reactors and fuel cells	Biomass and biological hydrogen production

**11:10 Coffee Break and Exhibition**

11:30		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Hydrogen aspects and steam reforming	Electrolysis, electrochemical reactors and fuel cells	Thermochemical cycles

**12:50 Lunch Break**

14:30		
<b>Auditorium "Vergina"</b>	<b>Room 1 "Aiolos"</b>	<b>Room 2 "INA"</b>
Hydrogen aspects and steam reforming	Electrolysis, electrochemical reactors and fuel cells	Emerging concepts

**15:50 Auditorium "Vergina"**  
Closing Remarks

**16:00 End of Conference**

# Monday 20 June 2011

**8:30**      **Registration Desk**  
Registration

**8:45**      **Auditorium "Vergina"**  
Opening Ceremony

**9:00**      **Auditorium "Vergina"**  
**Sustainable Hydrogen Production Options and the Role of IAHE**  
Prof. Ibrahim Dincer  
*Chairman: C.C. Agrafiotis*  
*Co-Chairman: S. Voutetakis*

**09:50 - 11:10**      **Auditorium "Vergina"**  
**Hydrogen aspects and steam reforming**  
*Chairman: E.S. Kikkinides*

**9:50**      **019REF**      A heterogeneous dynamic model for the simulation and optimization of the steam methane reforming reactor  
*G. Pantoleontos, E.S. Kikkinides, M.C. Georgiadis*

**10:10**      **123REF**      Hydrogen production by steam reforming of renewable compounds  
*G. Garbarino, E. Finocchio, G. Ramis, G. Busca*

**10:30**      **105REF**      Hydrogen production by steam reforming of model compound of bio-oil over Ni/CeO<sub>2</sub> - ZrO<sub>2</sub> catalysts  
*C. Yan*

**10:50**

**11:10**      **Coffee Break and Exhibition**

# Monday 20 June 2011

<b>09:50 - 11:10</b>		<b>Room 1 "Aiolos"</b> <b>Electrolysis, electrochemical reactors and fuel cells</b> <i>Chairman: D. Tsiplakides</i>
<b>9:50</b>	<b>016ELE</b>	Production of H <sub>2</sub> and C <sub>2</sub> hydrocarbons from methane in a proton conducting solid electrolyte cell <i>V. Kyriakou, C. Athanasiou, I. Garagounis, A. Skodra, M. Stoukides</i>
<b>10:10</b>	<b>026ELE</b>	Long term operation stability tests of intermediate and high temperatures Ni-based anodes' SOFCs directly fueled with simulated biogas mixtures <i>I.V. Yentekakis, T. Papadam, G. Goula</i>
<b>10:30</b>	<b>050ELE</b>	Nanocomposite membranes containing inorganic oxides from PEM fuel cells <i>Y. Devrim</i>
<b>10:50</b>	<b>096ELE</b>	Investigation of hydrogenation of Ti films under ion irradiation from water plasma <i>L. Pranevicius</i>
<b>11:10</b>		<b>Coffee Break and Exhibition</b>
<b>09:50 - 11:10</b>		<b>Room 2 "INA"</b> <b>Novel hydrogen storage technologies</b> <i>Chairman: A. Stubos</i>
<b>9:50</b>	<b>118STO</b>	Investigation of structural properties of ammonia borane and its waste product <i>O.M. Atanur, G.Y. Ozalp, M.B. Piskin, H.E. Figen, S.M. Yazici</i>
<b>10:10</b>	<b>149STO</b>	Transition metal nanoparticles as catalyst in hydrogen generation from boron based compounds <i>O. Metin, M. Zahmakıran, T. Ayvali, M. Dinc, S. Ozkar</i>
<b>10:30</b>	<b>198STO</b>	Synthesis of sodium borohydride and electrochemical analysis from reaction products <i>S. Kuliyeve, B. Ibrahimoglu, S. Fettah</i>
<b>10:50</b>	<b>242STO</b>	Kinetics of hydrogen production from hydrolysis of sodium borohydride over intrazeolite Co(0) nanoclusters in a flow reactor <i>A. Boran, S. Erkan, S. Ozkar, I. Eroglu</i>
<b>11:10</b>		<b>Coffee Break and Exhibition</b>

# Monday 20 June 2011

**11:30 - 12:50**      **Auditorium "Vergina"**  
**Thermochemical cycles**  
*Chairman: G.F. Naterer*

- 11:30**      **069THE**      A sulfur-iodine flowsheet using precipitation, electrodialysis and membrane separation to produce hydrogen  
*Y. Shin, K. Lee, Y. Kim, J. Chang, W. Cho, K. Bae*
- 11:50**      **109THE**      Molten salt heat recovery and solidification phase change in the copper-chlorine cycle  
*S. Ghandehariun, G.F. Naterer, M.A. Rosen*
- 12:10**      **229THE**      Experimental study of reaction rates and steam consumption in a copper (II) chloride fluidized bed reactor  
*K. Pope, V. Daggupati, G.F. Naterer*
- 12:30**      **243THE**      Heat extraction from molten salt for thermochemical hydrogen production cycles  
*A.H. Abedin*

**12:50**      **Lunch Break**

**11:30 - 12:50**      **Room 1 "Aiolos"**  
**Electrolysis, electrochemical reactors and fuel cells**  
*Chairman: I.V. Yentekakis*

- 11:30**      **131ELE**      The role of Nafion content and metal loading in IrO<sub>2</sub> sputtered electrodes for low temperature PEM water electrolysis  
*F. Sapountzi, S. Divane, E. Papaioannou, S. Souentie, C. G. Vayenas*
- 11:50**      **160ELE**      The fastest hydrogen sensor using ultrasonic  
*J. Jung, M. Sonoyama, H. Fujita, M. Inoue, Y. Kato*
- 12:10**      **167ELE**      Ir-Pt electrocatalysts for proton exchange membrane water electrolyzers  
*K.M. Papazisi, S. Balomenou, D. Tsiplakides*
- 12:30**      **181ELE**      Conductivity measurements of aqueous and immobilized potassium hydroxide  
*F. Allebrod, P.L. Mollerup, C. Chatzichristodoulou, M.B. Mogensen*

**12:50**      **Lunch Break**

# Monday 20 June 2011

11:30 - 12:50

Room 2 "INA"

**Photocatalytic processes**

*Chairman: K.S. Triantafyllidis*

11:30

071PHO

Hydrogen production by sonopholysis

*M. Filipponi*

11:50

170PHO

Photocatalytic reactor design for energy and environmental applications

*G.N. Nomikos, D.I. Kondarides, V.G. Mavrantzas, X.E. Verykios*

12:10

093PHO

Towards photocatalytic water-splitting by size-selected MoS<sub>2</sub> nanoclusters

*M. Cuddy*

12:30

138PHO

Non-supported alpha-Fe<sub>2</sub>O<sub>3</sub> nanocrystals as photocatalysts for water oxidation

*T.K. Townsend, F.E. Osterloh, E.M. Sabio, N. Browning*

12:50

**Lunch Break**

ICH2P-11 MONDAY



# Monday 20 June 2011

**14:30 Auditorium "Vergina"**  
**Photosynthesis for Hydrogen and Fuels Production**  
 Prof. Anastasios Melis  
*Chairman: I. Dincer*  
*Co-Chairman: V.T. Zaspalis*

**15:20 - 16:40 Auditorium "Vergina"**  
**Biomass and biological hydrogen production**  
*Chairman: A. Grudulus*

**15:20 040BIO** Optimizing biohydrogen production from mushroom waste using anaerobic mixed cultures  
*I.Y. Sung, C.H. Lay, K. Gopalakrishnan, C.Y. Chu, F.Y. Chang, C.C. Chen, C.Y. Lin*

**15:40 059BIO** Comparison of energy yields in sequential anaerobic production of H<sub>2</sub> and electricity or H<sub>2</sub> and CH<sub>4</sub>  
*M. Nissilä, D. Karadag, J.A. Puhakka*

**16:00 318BIO** Bio-hydrogen production by anaerobic and facultatively anaerobic bacteria pure cultures and associations using various substrates in experimental test-systems  
  
*I. Klepere*

**16:20 314BIO** Comparative biohydrogen production by "dark" Fermentation from glycerol using different selected microbial strain (s)  
*B.T. Maru, M. Constanti, F. Medina, A.M. Stchigel, J.E. Sueiras*

**16:40 Coffee Break and Exhibition**

# Monday 20 June 2011

15:20 - 16:40

**Room 1 "Aiolos"**  
**Thermochemical cycles**  
*Chairman: F. Wang*

- 15:20 251THE** Pinch analysis for effective heat recovery in the Cu-Cl cycle of hydrogen production  
*S. Ghandehariun, M. A. Rosen, G.F. Naterer, Z. Wang*
- 15:40 321THE** Hydrogen via thermochemical cycles: low temperature multicomponent SO<sub>2</sub>-O<sub>2</sub>-H<sub>2</sub>O vapour-liquid equilibrium in the hybrid sulphur and sulphur iodine cycles  
*M.A. Romero, R. Elder, R.W.K. Allen*
- 16:00 066THE** Experimental cupric chloride drying studies of spray atomization  
*M. Slowikowski, G.F. Naterer, V. Daggupati*
- 16:20 112THE** Hydrolysis and measured conversion of solid cupric chloride in a fluidized bed reactor  
*V. Daggupati, K. Pope, G.F. Naterer, K.S. Gabriel, Z.L. Wang*

16:40

**Coffee Break and Exhibition**

15:20 - 16:40

**Room 2 "INA"**  
**Conventional hydrogen production processes**  
*Chairman: V. Zaspalis*

- 15:20 027CON** Silica microporous membranes in catalytic membrane reactors for dehydrogenation processes  
*D. Koutsonikolas, S. Kaldis, V.T. Zaspalis, G.P. Sakellariopoulos*
- 15:40 100CON** Hydrogen production via underground coal gasification  
*A. Yildirim*
- 16:00 114CON** Experimental study of hydrogen production and soot particulate matter emissions from rich-combustion in inert porous media  
*A. Loukou, I. Frenzel, D. Trimis*
- 16:20 021CON** Solar Hydrogen/Fuels Production Systems  
*Z. Wang, K. Gabriel, G. Naterer*

16:40

**Coffee Break and Exhibition**

ICH2P-11 MONDAY

# Monday 20 June 2011

<b>17:00 - 18:20</b>		<b>Auditorium "Vergina"</b> <b>Biomass and biological hydrogen production</b> <i>Chairman: I. Eroglu</i>
<b>17:00</b>	<b>089BIO</b>	Comparison of mesophilic and thermophilic anaerobic hydrogen production by hot spring enrichment culture <i>D. Karadag, J.A. Puhakka, M. E. Nissila</i>
<b>17:20</b>	<b>090BIO</b>	Hydrogen-rich gas production from biomass wastes by catalytic steam gasification  <i>E. David</i>
<b>17:40</b>	<b>140BIO</b>	Improvement of integrated dark-photo fermentation biological hydrogen production processes by removing ammonium ion <i>D.D. Androga, E. Ozgur, U. Gunduz, M. Yu cel, I. Eroglu</i>
<b>18:00</b>	<b>142BIO</b>	Continuous biological hydrogen production by rhodobacter capsulatus HUP-Mutant in pilot solar tubular photobioreactor using artificial medium <i>E. Boran, E. Ozgur, M. Yu cel, U. Gunduz, I. Eroglu</i>
<b>18:20</b>	<b>End of Conference Day</b>	
<b>18:30</b>	<b>Room "Zefyros"</b> Executive Committee meeting of EHA	
	<b>Room 1 "Aiolos"</b> Executive Committee meeting of the Nuclear Hydrogen Division of IAHE	

# Monday 20 June 2011

<b>17:00 - 18:20</b>		<b>Room 1 "Aiolos"</b> <b>Hydrogen aspects and steam reforming</b> <i>Chairman: G. Karagiannakis</i>
<b>17:00</b>	<b>209REF</b>	Exergy efficiency analysis in hydrogen production via sorption enhanced steam methane reforming <i>C.S. Martavaltzi, K.F. Tzanetis, A. Lemonidou</i>
<b>17:20</b>	<b>400REF</b>	On the move – An overview of current Fuel Cell Hydrogen Joint Undertaking Projects <i>M. Krambousanos</i>
<b>17:40</b>	<b>102REF</b>	Production of hydrogen by hydrolysis and steam reforming of dimethyl ether over bifunctional catalysts: effect of preparation procedure and addition of promoter <i>C. Yan</i>
<b>18:00</b>		
<b>18:20</b>		<b>End of Conference Day</b>
<b>18:30</b>		<b>Room "Zefyros"</b> Executive Committee meeting of EHA
		<b>Room 1 "Aiolos"</b> Executive Committee meeting of the Nuclear Hydrogen Division of IAHE

# Monday 20 June 2011

<b>17:00 - 18:20</b>		<b>Room 2 "INA"</b> <b>Novel hydrogen storage technologies / Hydrogen separation processes</b> <i>Chairmen: S.M. Yazici / N.D. Vlachos</i>
<b>17:00</b>	<b>235STO</b>	Hydrogen storage with the use of nanoporous carbon supports and scaffolds <i>T. Steriotis, G. Charalambopoulou, A. Bourlinos, D. Giasafaki, A. Ampoumogli, P. Trikalitis, A. Stubos</i>
<b>17:20</b>	<b>264STO</b>	Hydrogen sorption of modified oxides  <i>L. Grinberga, A. Sivars, J. Kleperis</i>
<b>17:40</b>	<b>012SEP</b>	Development of the membrane permeator for hydrogen purification to national hydrogen and fuel cell center from Romanian: technical aspects <i>I. Iordache</i>
<b>18:00</b>	<b>221SEP</b>	Selective hydrogen absorption from gaseous mixtures by the BCC T-V alloys <i>S. Suwarno, J.K. Solberg, V.A. Yartys, J.P. Maehlen, B. Krogh, B.T. Børresen, E.O. Fernández</i>
<b>18:20</b>	<b>End of Conference Day</b>	
<b>18:30</b>	<b>Room "Zefyros"</b> Executive Committee meeting of EHA	
	<b>Room 1 "Aiolos"</b> Executive Committee meeting of the Nuclear Hydrogen Division of IAHE	

# Tuesday 21 June 2011

**8:30**      **Registration Desk**  
Registration

**9:00**      **Auditorium "Vergina"**  
**High-temperature Solar Thermochemical Hydrogen Production**  
Prof. Tatsuya Kodama  
*Chairman: A.G. Konstandopoulos*  
*Co-Chairman: G.F. Naterer*

**09:50 - 11:10**      **Auditorium "Vergina"**  
**Solar hydrogen/Fuels production systems**  
*Chairman: M. Kostoglou*

**9:50**      **155SOL**      Effect of reactor geometry on the temperature distribution of hydrogen producing solar reactors  
*N.E. Ghazal, J. Costandy, M.A. Shammasi, N. Ozalp*

**10:10**      **214SOL**      Development and test of a solar decomposer of sulphuric acid for thermochemical hydrogen production  
*D. Thomey, F. Lennartz, D. Schollgen, L.D. Oliveira, J.P. Sack, M. Roeb, C. Sattler*

**10:30**      **315SOL**      Thermal and optical analysis of a 100 kWth multi-tubular reactor for hydrogen production based on a two-step thermochemical cycle integrated in a solar tower  
*M.M. Betancourt, V.G. García-Orta, A.G. Pardo, J.G. Aguilar, M. Romero, A. Iranzo, A. Salva, E. Tapia*

**10:50**      **323SOL**      Performance analysis of a water splitting reactor with hybrid photochemical conversion of solar energy  
*E. Baniasadi, I. Dincer, G.F. Naterer*

**11:10**      **Coffee Break and Exhibition**

# Tuesday 21 June 2011

09:50 - 11:10

**Room 1 "Aiolos"****Electrolysis, electrochemical reactors and fuel cells***Chairman: M.S. Stoukides*

- 9:50**      **187ELE**      Simulation of polymer electrolyte membrane fuel cell stack displacements under random vibration  
*H. Shen*
- 10:10**      **147ELE**      Investigation of Stainless-Steel–Resorcinol-Formaldehyde (SS-RF) electrode-catalyst for alkaline electrolyser operation  
*T.G. Douglas*
- 10:30**      **152ELE**      Measurement of the through-plane thermal conductivity of carbon paper diffusion media for the temperature range from -20°C to +120°C  
*N. Zamel*
- 10:50**      **164ELE**      Development of anode-supported flat-tube SOFC stack having a new IC design  
*S.B. Lee, J.W. Lee, T.H. Lim, S.J. Park, R.H. Song, D.R. Shin*

11:10

**Coffee Break and Exhibition**

09:50 - 11:10

**Room 2 "INA"****Biomass and biological hydrogen production***Chairman: C. Varrone*

- 9:50**      **162BIO**      Biohydrogen production from dairy manure blended with sucrose  
*N. Khandan, K.R.J. Perera*
- 10:10**      **168BIO**      Temperature resistant mutants of rhodobacter capsulatus generated by evolutionary engineering approach and effects of temperature resistance on hydrogen production  
*A. Gokce, Y. Ozturk, Z.P. Cakar, M. Yuçel*
- 10:30**      **197BIO**      The effects of temperature and light intensity on organic acid utilization of photosynthetic bacteria during biohydrogen production process  
*P. Sevinc, I. Eroglu, M. Yuçel, U. Gunduz*
- 10:50**      **210BIO**      Statistical optimization of biohydrogen and ethanol production from crude glycerol by enriched activity sludge  
*C. Varrone, B. Giussani, G. Izzo, G. Massini, A. Marone, A. Signorini, A. Wang*

11:10

**Coffee Break and Exhibition**

# Tuesday 21 June 2011

<b>11:30 - 12:50</b>		<b>Auditorium "Vergina"</b> <b>Solar hydrogen/Fuels production systems</b> <i>Chairman: A.G. Konstandopoulos</i>
<b>11:30</b>	<b>275SOL</b>	Experimental study and simulation of a photochemical reactor for solar hydrogen generation from water <i>C.F. Zamfirescu, I. Dincer, G.F. Naterer</i>
<b>11:50</b>	<b>258SOL</b>	Effect of seeding on hydrogen and carbon particle production in a 10 MW solar thermal reactor for methane decomposition <i>G. Patrianakos, M. Kostolgu, A.G. Konstandopoulos</i>
<b>12:10</b>	<b>259SOL</b>	Materials for solar-aided production of hydrogen from water: kinetic studies of the two-step redox pair-based thermochemical cycles <i>C.C. Agrafiotis, A. Zygogianni, C. Pagoura, A.G. Konstandopoulos, M. Kostoglou</i>
<b>12:30</b>	<b>014SOL</b>	Solar syngas production from CO <sub>2</sub> and H <sub>2</sub> O in a two-step thermochemical cycle via Zn/ZnO redox reactions: Thermodynamic cycle analysis <i>P.G. Loutzenhiser, A. Steinfeld</i>
<b>12:50</b>		<b>Lunch Break</b>
<b>11:30 - 12:50</b>		<b>Room 1 "Aiolos"</b> <b>Electrolysis, electrochemical reactors and fuel cells</b> <i>Chairman: M.Ouzounidou</i>
<b>11:30</b>	<b>171ELE</b>	Developing a new method for the preparation of catalyst coated membranes via LbL technique for PEM fuel cells <i>H. Deligoz, S. Yilmazturk, T. Gümüşoglu, G.A. Ari, M.A.F. Oksuzomer</i>
<b>11:50</b>	<b>184ELE</b>	Performance and durability of MEA prepared with hydrocarbon based membrane by decal transfer process  <i>S.-D. Yim</i>
<b>12:10</b>	<b>186ELE</b>	On the use of electrodeposited Ni-W alloy coatings as cathodes for hydrogen evolution in potassium hydroxide solution – a reduction of energy consumption  <i>G.S. Tasic, M.P. Marceta, V.M. Nikolic, M.M. Tasic, A.D. Maksic</i>
<b>12:30</b>	<b>200ELE</b>	Numerical and experimental analysis of SOFC  <i>S. Aksongur</i>
<b>12:50</b>		<b>Lunch Break</b>



# Tuesday 21 June 2011

11:30 - 12:50

Room 2 "INA"

**Biomass and biological hydrogen production**

*Chairman: I. Klepere*

- 11:30**     **223BIO**     Hydrogen production from vegetable waste by bioaugmentation of indigenous fermentative communities  
*A. Marone, G. Massini, C. Patriarca, A. Signorini, C. Varrone, G. Izzo*
- 11:50**     **320BIO**     Building up bioreactor prototype and optimisation for experiments with hydrogen and methane gas producing microorganisms  
*A. Gruduls*
- 12:10**     **068BIO**     Steam and air fed biomass gasification: energy and exergy comparisons  
*M. Hosseini, I. Dincer, M. Rosen*
- 12:30**     **070BIO**     Biological hydrogen production performance in a draft tube fluidized bed bioreactor with immobilized cell  
*C.Y. Chu, S.Y. Wu, Y.C. Shen, Y.C. Li, C.Y. Lin*

12:50

**Lunch Break**

# Tuesday 21 June 2011

**14:30 - 15:30**      **Auditorium "Vergina"**  
**Thermochemical cycles**  
*Chairman: C.C. Agrafiotis*

- 14:30**      **254THE**      Oxide -based candidate catalysts for the reduction of SO<sub>3</sub> into SO<sub>2</sub>: a key step for H<sub>2</sub> production via sulphur-based thermochemical cycles  
*G. Karagiannakis, C.C. Agrafiotis, A. Zygogianni, C. Pagkoura, A.G. Konstandopoulos*
- 14:50**      **148THE**      System integration of hydrolysis, oxygen and hydrogen generation processes in Cu-Cl thermochemical water splitting  
*Z. Wang, G. Marin, G.F. Naterer*
- 15:10**      **237THE**      Process simulation and analysis of a copper chlorine thermochemical water decomposition cycle for nuclear-based hydrogen production  
*M.F. Orhan, I. Dincer, M.A. Rosen*

**14:30 - 15:30**      **Room 1 "Aiolos"**  
**Hydrogen Life Cycle Analysis/Feasibility studies**  
*Chairman: I. Dincer*

- 14:30**      **074LCA**      Exergoeconomic analysis of hydrogen production from biomass gasification  
*Y. Kalinci, A. Hepbasli, I. Dincer*
- 14:50**      **273LCA**      Comparative Life Cycle Assessment of hydrogen and other selected fuels  
*K. Hacetoglu, M.A. Rosen, I. Dincer*
- 15:10**      **003LCA**      Hydrogen energy for indian transport sector: a well-to-wheel techno-economic and environmental feasibility analysis  
*B.S. Reddy, P. Balachandra*

**14:30 - 15:30**      **Room 2 "INA"**  
**Hydrogen perspectives from government and industry**  
*Chairman: E. Varkaraki*

- 14:30**      **128GOV**      South African energy profile and hydrogen production for fuel cell applications  
*D. Bessarabov, F.V. Niekerk, F.V.D. Merwe, J.V. Ravenswaay, B. North, M. Mathe*
- 14:50**      **202GOV**      Hydrogen refuelling station in Hamburg HafenCity. A status report  
*C. Wulf, D. Hustadt, M. Kaltschmitt, O. Weinmann*
- 15:10**      **217GOV**      Hydrogen energy in the developing world: oxymoron or opportunity?  
*N. Lymberopoulos, F. Villatico, O. Tabakoglu, M. Hatipoglu*

# Tuesday 21 June 2011

15:40 - 16:40

**Auditorium "Vergina"****Conventional hydrogen production processes***Chairman: O.M. Dudnyk*

**15:40**     **098CON**     H<sub>2</sub> production by methane decomposition: catalytic and technological aspects

*F. Frusteri*

**16:00**     **106CON**     Catalytic decomposition of methane for the CO<sub>x</sub> free hydrogen production over modified Ni-SiO<sub>2</sub> catalysts

*V. Akula*

**16:20**     **213CON**     Theoretical and experimental investigation of low temperature water-gas shift membrane reactor

*M. Basu, A. Mondal, B. Mandal*

15:40 - 16:40

**Room 1 "Aiolos"****Hydrogen in vehicles***Chairman: D. Zarvalis*

**15:40**     **125VEH**     The research on efficiency of using HHO gas (oxyhydrogen) in petrol internal combustion engines

*A. Rimkus, S. Pukalskas, J. Matijosius*

**16:00**     **179VEH**     Synthesis gas generation on-board a vehicle: R&D, trials, perspectives

*V.A. Kirillov*

**16:20**     **317VEH**     Behavior of dimensionless parameters for the in-cylinder heat transfer in hydrogen fueled engine

*M.M. Rahman, K.I. Hamada*

15:40 - 16:40

**Room 2 "INA"****Hydrogen perspectives from government and industry***Chairman: E. Irakleous*

**15:40**     **247GOV**     The hydrogen implementing agreement of the International Energy Agency and the participation of Greece

*E. Varkaraki, M.R.D. Valladares, A.G. Garcia-Conde*

**16:00**     **262GOV**     Hydrogen as a fuel and energy storage in Germany

*O.M. Ehret*

**16:20**     **319GOV**     Renewable hydrogen market development: forecasts and opportunities for Latvia

*J. Dimants*

16:40

**Coffee Break and Exhibition**

# Tuesday 21 June 2011

<b>17:00 - 18:00</b>		<b>Auditorium "Vergina"</b> <b>Conventional Hydrogen production processes</b> <i>Chairman: F. Frusteri</i>
<b>17:00</b>	<b>246CON</b>	Hydrogen rich gas generation using plasma gasification of Ukrainian anthracite and brown coal <i>V.A. Zhovtianskyi, O.M. Dudnyk, I.O. Nevzgliad, I.S. Sokolovska</i>
<b>17:20</b>	<b>133CON</b>	Effects of PVP on the preparation of nanosized Al <sub>2</sub> O <sub>3</sub> supported Ni catalysts by POLYOL method for catalytic partial oxidation of methane <i>T.G. Altınçekiç, E. Bayrakdar, M.A.F. Öksüzömer</i>
<b>17:40</b>	<b>274THE</b>	Photochemical cell for cuprous chloride disproportionation and hydrogen generation with the Cu-Cl cycle <i>C. Zamfirescu, G.F. Naterer, I. Dincer</i>
<b>17:00 - 18:00</b>		<b>Room 1 "Aiolos"</b> <b>Hydrogen in vehicles</b> <i>Chairman: D. Zarvalis</i>
<b>17:00</b>	<b>322VEH</b>	Smart grids meets green transportation <i>R. Schmid</i>
<b>17:20</b>	<b>178VEH</b>	Hydrogen generation with the exhaust energy of internal combustion engine <i>J.H. Lu</i>
<b>17:40</b>	<b>145VEH</b>	Effect of hydrogen addition on combustion and emission characteristics of a SI engine at idle condition <i>Y. Karagoza, M. Eroglu, E. Oraka, T. Sandalcia</i>
<b>17:00 - 18:00</b>		<b>Room 2 "INA"</b> <b>Hydrogen from renewables</b> <i>Chairman: M. Taxiarchou</i>
<b>17:00</b>	<b>238REN</b>	Implementation of a hybrid energy system combining RES and H <sub>2</sub> in an office building in Lavrion-Greece <i>I. Paspaliaris, M. Taxiarchou, A. Peppas, P. Benardos, S. Carosio, G. Urbano, A. Monero, R. De Laurentiis</i>
<b>17:20</b>	<b>325REN</b>	A thermodynamic study on renewable energy based hydrogen production and storage systems <i>H. Caliskan, I. Dincer, A. Hepbasli</i>
<b>17:40</b>	<b>267REN</b>	Performance assessment of an integrated absorption-hydrogen liquefaction system using geothermal energy <i>M.A. Gadalla</i>
<b>18:00</b>	<b>Poster session and Exhibition</b>	
<b>20:00</b>	<b>End of Conference Day</b>	
<b>20:00</b>	<b>Conference Dinner</b> <i>Speech given by Prof. Xenophon Verykios</i>	

# Tuesday 21 June 2011

## 18:00 Poster session and Exhibition

### Poster area

#### Hydrogen aspects and steam reforming

- 013REF** Structural and mechanistic aspects for the low temperature steam reforming of ethanol over supported noble metal catalysts  
*P. Panagiotopoulou, X. Verykios*
- 024REF** Steam reforming of methanol, ethanol, n-heptane and iso-octane over a copper-based catalyst to produce hydrogen  
*C. Ji, X. Dai*
- 062REF** Hydrogen production by steam reforming of methane over nickel catalysts prepared by successive impregnation method  
*N. Salhi, A. Boulahouache, M. Belacel, S. Benadji, C. Rabia*
- 169REF** Numerical study of miniature methanol-steam reformer performance under various external heat transfer conditions  
*R. Chein*
- 206REF** The study of parameter optimizations for hydrogen rich gas production by CPOX reforming  
*Y.B. Jo*

## 18:00 Poster area

### Thermochemical cycles

- 101THE** Thermalhydraulic and heat transfer correlations for an intermediate heat exchanger linking a supercritical water-cooled reactor and a copper-chlorine cycle of hydrogen production  
*S. Mokry, A. Lukomski, K. Gabriel, I. Piro, G.F. Naterer*
- 113THE** Energy and exergy analyses of Magnesium-Chlorine (Mg-Cl) thermochemical cycle  
*M.T. Balta, I. Dincer, A. Hepbasli*
- 115THE** Gas-solid flow and heat transfer in a molten salt reactor for thermochemical water splitting  
*G.D. Marin, Z. Wang, G.F. Naterer, K. Gabriel*
- 244THE** Lab management practices for high temperature reactors of thermochemical hydrogen production  
*E. Secnik, Z. Wang, G.F. Naterer, K.S. Gabriel*

# Tuesday 21 June 2011

## 18:00 Poster area Biomass and biological hydrogen production

- 068BIO** Steam and air fed biomass gasification: energy and exergy comparisons  
*M. Hosseini, I. Dincer, M. Rosen*
- 163BIO** Redox balancing and hydrogen production of photosynthetic bacterium *rhodobacter capsulatus*  
*Y. Ozturk, M. Yucel, U. Gunduz, I. Eroglu*
- 224BIO** Influence of upflow velocity, C/N ratio and bed height in anaerobic fluidized bed reactor in hydrogen production  
*A.R. Barros, E.L. Silva*
- 313BIO** Biogas and hydrogen production potential based on milk-processing waste water for Turkey  
*Z. Oktay, C. Coskun, I. Dincer, M. Bayraktar*

## 18:00 Poster area Conventional hydrogen production processes

- 107CON** Thermodynamic analysis of hydrogen generation from coke oven gas  
*W.H. Chen, J.J. Lu*

## 18:00 Poster area Electrolysis, electrochemical reactors and fuel cells

- 135ELE** Preparation and characterization of La<sub>0.8</sub>Sr<sub>0.2</sub>Ga<sub>0.83</sub>Mg<sub>0.17</sub>O<sub>3</sub> electrolyte by POLYOL method for solid oxide fuel cells  
*F. Oksuzomer, R.S. Kuguoglu, T.G. Altincekic, M.A. Gurkaynak*
- 143ELE** Construction of graphene/Pt nanoparticle nanohybrids as an electrocatalyst for fuel cells  
*W.H. Hong, B.G. Choi, D. Jung*
- 153ELE** Synthesis and characterization of polypyrrole/carbon composite as a catalyst support for fuel cell applications  
*T. Oznuluer, F. Memioglu, M. Ak, A. Bayrakceken*
- 165ELE** Ceramic and glass composite interconnects for solid oxide fuel cells  
*S.B. Lee, S.H. Pi, J.W. Lee, T.H. Lim, S.J. Park, R.H. Song, D.R. Shin*
- 166ELE** Redox behavior of Ni-YSZ composite anode support for solid oxide fuel cells: effects of exposure time and pore former  
*J.W. Lee, Y.H. Heo, T.H. Lim, S.B. Lee, S.J. Park, R.H. Song, D.R. Shin*

# Tuesday 21 June 2011

- 177ELE** Development of a 0.16 kW HT PEM FC based pilot power plant  
*V. A. Kirillov*
- 190ELE** Ni-W alloys electrodeposited on a Ni substrate electrode - electrodeposition vs. in situ activation for hydrogen production via alkaline electrolysis  
*M.M. Tasic, M.P. Marceta, G.S. Tasic, D.P. Saponjic, S. Miulovic, V.M. Nikolic*
- 194ELE** Preparation and characterization of ionically cross-linked polyelectrolyte complex membranes for direct methanol fuel cells  
*H. Deligoz, T. Gumusoglu, G.A. Ari*
- 201ELE** Raising efficiency of hydrogen production via alkaline water electrolysis  
*A.D. Maksic, G.S. Tasic, V.M. Nikolic, D.P. Saponjic, S.M. Miulovic, M.P.M. Kaninski*
- 207ELE** Stability of the Ni-Mo based cathode for the alkaline hydrogen production  
*D.P. Saponjic, V.M. Nikolic, S.M. Miulovic, G.S. Tasic, M.P.M. Kaninski*
- 208ELE** A study of the Co-W activated Ni cathodes for hydrogen generation  
*S.M. Miulovic, V.M. Nikolic, G.S. Tasic, A.D. Maksic, M.P.M. Kaninski*

## 18:00 Poster area Emerging concepts

- 108EME** An experimental study on hydrogen production from water using activated carbon as a reducing agent  
*W.H. Chen*
- 183EME** Aluminum activated by liquid alloys as the material for the course of pure hydrogen  
*T.V. Polyanskaya*
- 185EME** Mechanism of activation of Al and Al-base alloys by the Ga-In eutectic  
*A.I. Nizovskii*
- 233EME** Hydrogen generation from water by means of activated aluminum  
*A.V. Ilyukhina, A.S. Ilyukhin, E.I. Shkolnikov*

# Tuesday 21 June 2011

<b>18:00</b>	<b>Poster area</b> <b>Hydrogen from renewables</b>
<b>241REN</b>	Simulation of a hybrid energy system combining RES and H <sub>2</sub> systems using TRNSYS. Case Study: an office building in Lavrion-Greece <i>L. Karalis, A. Peppas, I.Paspaliaris</i>
<b>265REN</b>	Wind -hydrogen systems: opportunities and challenges <i>E. Varkaraki</i>
<b>311REN</b>	Performance Investigation of Hydrogen Production from a Hybrid Wind-PV System <i>Z. Oktay, E. Akyuz, I. Dincer</i>
<b>18:00</b>	<b>Poster area</b> <b>Hydrogen Life Cycle Analysis/Feasibility studies</b>
<b>199LCA</b>	Life cycle assessment of a hydrogen refueling station <i>C. Wulf, M. Kaltschmitt</i>
<b>18:00</b>	<b>Poster area</b> <b>Hydrogen perspectives from government and industry</b>
<b>020GOV</b>	Photo-voltaic supported fuel cell and battery for electrical tour boats at the Turkish Dalyan Channel <i>N. Ozgur</i>
<b>268GOV</b>	Latvian Hydrogen Association: researches and implementation of hydrogen technologies in Latvia <i>J. Kleperis</i>
<b>18:00</b>	<b>Poster area</b> <b>Novel hydrogen storage technologies</b>
<b>119STO</b>	Thermal decomposition characteristics of ammonia borane as hydrogen source <i>A.K. Figen, H. Erguven, G.Y. Ozalp, S. Yazici, S. Piskin</i>
<b>137STO</b>	A potential method for producing Mg <sub>2</sub> Ni as hydrogen storage alloy <i>F. Erden, I. Karakaya, M. Erdogan</i>
<b>331STO</b>	Oleylamine stabilized palladium(0) nanoclusters as highly active heterogeneous catalyst for the dehydrogenation of ammonia borane <i>O. Metin, S. Duman, S. Ozkar</i>
<b>336STO</b>	Effect of Na <sub>2</sub> CO <sub>3</sub> and NaOH on the production of sodium borohydride <i>I. Kayacan, O.M. Dogan, B.Z. Uysal</i>



# Tuesday 21 June 2011

**18:00** **Poster area**  
**Photocatalytic processes**

**227PHO** Zn<sub>2</sub>x(CuIn)<sub>1-x</sub>S<sub>2</sub> photocatalysts synthesis by a hydrothermal process using H<sub>4</sub>EDTA as complexing and surfactant agent  
*R. Banica, T. Nyaril, A. I. Bucur*

**260PHO** Photochemical characteristics of TiO<sub>2</sub> nanostructured layers for hydrogen production

*L. Grinberga, J. Linitis, J. Kleperis*

**18:00** **Poster area**  
**Solar hydrogen/Fuels production systems**

**203SOL** Hydrothermal synthesis and characterization of mixed II-III<sub>2</sub>-VI<sub>4</sub> photocatalysts for solar hydrogen production  
*T. Nyari, R. Banica, E. Indrea, V. Sasca*

**261SOL** Solar carbon-neutral syngas generation by H<sub>2</sub>O and CO<sub>2</sub> splitting thermochemical cycles  
*A. Zygogianni, C. Pagoura, G. Karagiannakis, C. Agrafiotis, A.G. Konstandopoulos*

**263SOL** On the modeling of hydrogen production via thermochemical cycles in monolithic reactors exploiting solar energy  
*M. Kostoglou, C.P. Lekkos, A.G. Konstandopoulos*

# Wednesday 22 June 2011

- 8:30**      **Registration Desk**  
Registration
- 9:00**      **Auditorium "Vergina"**  
**Highly efficient production of hydrogen with novel catalysts containing only trace amounts of precious metals**  
Prof. Maria Flytzani-Stephanopoulos  
*Chairman: M.S. Stoukides*  
*Co-Chairman: A. Lemonidou*

**09:50 - 11:10**      **Auditorium "Vergina"**  
**Hydrogen aspects and steam reforming**  
*Chairman: L.T. Nalbandian*

- 9:50**      **134REF**      A novel membrane reactor concept for hydrogen production from the decomposition of water and simultaneous production of synthesis gas over ceramic materials  
*L.T. Nalbandian, A.P. Evdou, V.T. Zaspalis*
- 10:10**      **136REF**      Development of multi fueled units for hydrogen and energy production  
*A. Basagiannis, A. Stavarakas, T. Halkides*
- 10:30**      **156REF**      Support and alloy effects on activity and product selectivity for ethanol steam reforming over supported nickel cobalt catalysts  
*L. Chen*
- 10:50**      **182REF**      Reforming of dimethyl ether to hydrogen-rich gas for HT PEM fuel cells  
*V.A. Sobyenin, V.A. Kirillov, S.D. Badmaev, P.V. Snytnikov, V.D. Belyaev, V.D. Mescheriakov*

**11:10**      **Coffee Break and Exhibition**

# Wednesday 22 June 2011

**09:50 - 11:10**      **Room 1 "Aiolos"**  
**Electrolysis, electrochemical reactors and fuel cells**  
*Chairman: A. Papadopoulos*

- 9:50**      **189ELE**      Disturbance rejection sensitivity analysis in an integrated methanol reforming and fuel cell system  
*D. Ipsakis, S. Voutetakis, P. Seferlis, S. Papadopoulou*
- 10:10**      **192ELE**      The prospects of an internal reforming methanol fuel cell  
*G. Avgouropoulos, J. Papavasiliou, T. Ioannides, S. Neophytides*
- 10:30**      **215ELE**      Electrocatalysis of oxygen evolution reaction in PEM water electrolysis on a Ebonex supported Pt- based binary compounds  
*A. Stoyanova, G. Borisov, E. Lefterova, E. Slavcheva*
- 10:50**      **218ELE**      Ab-initio development of CaNi<sub>5</sub>-XMX compounds for metal hydride batteries  
*O. Mugan, M.K. Aydinol*

**11:10**      **Coffee Break and Exhibition**

**09:50 - 11:10**      **Room 2 "INA"**  
**Biomass and biological hydrogen production**  
*Chairman: S. Bezergianni*

- 9:50**      **313BIO**      Biogas and hydrogen production potential based on milk-processing waste water for Turkey  
*Z. Oktay, C. Coskun, I. Dincer, M. Bayraktar*
- 10:10**      **073BIO**      Enhanced bio-hydrogen production by immobilized Clostridium sp. T2 on biological carrier  
*L. Zhao, A.J. Wang, G.L. Cao, N.Q. Ren*
- 10:30**      **159BIO**      Potential for using isolated bacterial strains for production of biohydrogen from oil palm trunk  
*P. Noparat, P. Prasertsan, S. O-thong*
- 10:50**      **232BIO**      Operation of an innovative pilot plan for the biohythane production from the Organic Fraction of Municipal Solid Waste (OFMSW)  
*E. Trably*

**11:10**      **Coffee Break and Exhibition**

# Wednesday 22 June 2011

**11:30 - 12:50 Auditorium "Vergina"**  
**Hydrogen aspects and steam reforming**  
*Chairman: S. Voutetakis*

- 11:30 195REF** Experimental study on syngas production via biogas reforming with water  
*T. Kim, S. Song, K.M. Chun*
- 11:50 219REF** Alcohol reforming on cobalt-based catalysts prepared from organic salt precursors  
*E. Papadopoulou, D. Delimaris, A. Denis, A. Machocki, T. Ioannides*
- 12:10 220REF** Hydrogen production via reforming of the aqueous fraction of bio-oil in a pilot plant unit  
*M. Ouzounidou, I. Grigoriadis, G. Dourou, A. Lemonidou, S. Voutetakis*
- 12:30 256REF** Hydrogen production from methanol, dimethyl ether and bioethanol for fuel cell applications  
*P.V. Snytnikov, S. Badmaev, G. Volkova, D. Potemkin, M. Zyryanova, V. Belyaev, V. Sobyenin*

**12:50 Lunch Break**

**11:30 - 12:50 Room 1 "Aiolos"**  
**Electrolysis, electrochemical reactors and fuel cells**  
*Chairman: A. Bayrakceken*

- 11:30 230ELE** Nanostructured nickel-based electrodeposits as electrocatalysts for microbial electrolysis cells  
*M. Mitov, Y. Hubenova*
- 11:50 266ELE** Current behaviour during pulsed DC electrolysis of water  
*J. Kleperis*
- 12:10 312ELE** Combustion chemistry aspects of high-temperature reforming for fuel cell applications  
*G. Skevis, G. Vourliotakis, M. Founti*
- 12:30 056ELE** Acetic acid internal reforming in a solid oxide fuel cell reactor using Cu-CeO<sub>2</sub> anodic composites  
*N. Kaklidis, G. Pekridis, G.E. Marnellos*

**12:50 Lunch Break**

# Wednesday 22 June 2011

<b>11:30 - 12:50</b>		<b>Room 2 "INA"</b> <b>Thermochemical cycles</b> <i>Chairman: T. Kodama</i>
<b>11:30</b>	<b>065THE</b>	Particle moisture and size distribution in solid cupric chloride drying processes  <i>M. Slowikowski, G.F. Naterer</i>
<b>11:50</b>	<b>101THE</b>	Thermalhydraulic and heat transfer correlations for an intermediate heat exchanger linking a supercritical water-cooled reactor and a copper-chlorine <i>S. Mokry, A. Lukomski, K. Gabriel, I. Pioro, G.F. Naterer</i>
<b>12:10</b>	<b>113THE</b>	Energy and exergy analyses of Magnesium-Chlorine (Mg-Cl) thermochemical cycle  <i>M.T. Balta, I. Dincer, A. Hepbasli</i>
<b>12:30</b>	<b>115THE</b>	Gas-solid flow and heat transfer in a molten salt reactor for thermochemical water splitting  <i>G.D. Marin, Z. Wang, G.F. Naterer, K. Gabriel</i>
<b>12:50</b>	<b>Lunch Break</b>	

# Wednesday 22 June 2011

<b>14:30 - 15:50</b>		<b>Auditorium "Vergina"</b> <b>Hydrogen aspects and steam reforming</b> <i>Chairman: A. Lemonidou</i>
<b>14:30</b>	<b>011REF</b>	Plasma stabilized partial oxidation reformer of liquid hydrocarbons into syngas <i>A. Nikipelov</i>
<b>14:50</b>	<b>117REF</b>	Steam reforming of glycerol, the side product of biodiesel for hydrogen production  <i>A.C.C. Chang</i>
<b>15:10</b>	<b>212REF</b>	Hydrogen production with simultaneous CO <sub>2</sub> separation via sorption enhanced reforming of methane <i>C.S. Martavaltzi, E.S Pampaka, S. Chatoutsidou, E.A. Korkakaki, T. Pefkos, A.A. Lemonidou</i>
<b>15:30</b>	<b>272REF</b>	Modified commercial Faujasite as Co support for the steam reforming of bioethanol. Influence of mesoporosity and alkaline metals on the catalytic performance <i>A. Chica, J.F.D. Costa-Serra, M.T. Navarro, F. Rey</i>
<b>15:50</b>	<b>Auditorium "Vergina"</b> Closing Remarks	
<b>16:00</b>	<b>End of Conference</b>	

# Wednesday 22 June 2011

<b>14:30 - 15:50</b>		<b>Room 1 "Aiolos"</b> <b>Electrolysis, electrochemical reactors and fuel cells</b> <i>Chairman: G.E. Marnellos</i>
<b>14:30</b>	<b>063ELE</b>	Intelligent optimisation of a renewable energy Photovoltaic / PEM Fuel Cell hybrid system <i>M. Hatti</i>
<b>14:50</b>	<b>067ELE</b>	Hydrogen production by water electrolysis : Part 2: Effects of the electrolyte type on the performances of electrolysis with a tension generator or a photovoltaic module to the wire of the sun <i>R.B. Slama</i>
<b>15:10</b>	<b>188ELE</b>	Automation design and simulated operation of a solar-hydrogen integrated system located at CERTH/CPERI <i>C. Ziogou, D. Ipsakis, F. Stergiopoulos, S. Papadopoulou, S. Bezergianni, S. Voutetakis</i>
<b>15:30</b>	<b>204ELE</b>	Parameters influencing long term performance and durability of PEM fuel cells  <i>E.S. Sayin, A. Bayrakceken, I. Eroglu</i>
<b>15:50</b>	<b>Auditorium "Vergina"</b> Closing Remarks	
<b>16:00</b>	<b>End of Conference</b>	

# Wednesday 22 June 2011

<b>14:30 - 15:50</b>		<b>Room 2 "INA"</b> <b>Emerging concepts</b> <i>Chairman: G. Patrianakos</i>
<b>14:30</b>	<b>092EME</b>	Catalytic degradation of plastic wastes into fuel compounds <i>E. David</i>
<b>14:50</b>	<b>176EME</b>	Effects of aluminum particle size, galinstan content and reaction temperature on hydrogen generation rate using activated aluminum and water  <i>J. Kandasamy, I.S. Gokalp, C. Chauveau</i>
<b>15:10</b>	<b>172EME</b>	Hydrogen production by plasmas <i>J. Mizeraczyk</i>
<b>15:30</b>	<b>234EME</b>	Aluminum-water generator of hydrogen for portable fuel cells <i>A.S. Ilyukhin, A. Ilyukhina, E. Shkolnikov</i>
<b>15:50</b>	<b>Auditorium "Vergina"</b> Closing Remarks	
<b>16:00</b>	<b>End of Conference</b>	