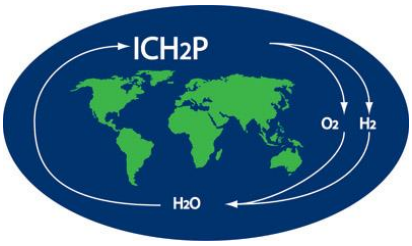
ICH2P-15
INTERNATIONAL CONFERENCE
on
HYDROGEN PRODUCTION-2015

May 3 – 6, 2015
University of Ontario Institute of Technology
Oshawa, Ontario, Canada



CONFERENCE PROGRAM

Organized by

Clean Energy Research Laboratory
Faculty of Engineering and Applied Science
University of Ontario Institute of Technology

Cooperating Organizations

International Association of Hydrogen Energy
Memorial University of Newfoundland
Turkish Academy of Sciences
World Society of Sustainable Energy Technologies

SUNDAY MAY 3, 2015	
Time	**Location: UA East Atrium**
01:00pm – 07:00pm	Registration

MONDAY MAY 4, 2015			
Time	**Room (UA 1350)**		
8:30am	Opening Remarks: I. Dincer (Conference Chair, Faculty of Engineering and Applied Science, UOIT) T. Sidhu (Dean, Faculty of Engineering and Applied Science, UOIT) M. Owen (Vice-President, Research, Innovation & International, UOIT) T. McTiernan (President of UOIT) J. Henry (Mayor of Oshawa)		
9:00am-10:30am	Chair: G.F. Naterer Keynote Lecture: Using Cascade Concepts to Design Better Performing Catalysts L. T. Thompson (University of Michigan, USA) Keynote Lecture: Assessing the Future of Hydrogen Production using Nuclear Power I. Khamis (International Atomic Energy Agency, Austria)		
10:25am-10:45am	**Refreshment Break**		
Time	**Room (UA 2120)**	**Room (UA 2220)**	**Room (UA 2230)**
10:45am-12:25pm (100 min)	**Session 1-A: Thermochemical Copper-Chlorine Cycle, Chair: I. Khamis**	**Session 1-B: Hydrogen and Steam Reforming Technology, Chair: L. T. Thompson**	**Session 1-C: Solar and Photonic Based Hydrogen Production, Chair: J. V. C. Vargas**
	351 - HEAT AND MASS TRANSFER OF COPPER OXY-CHLORIDE SPRAY REACTOR FOR THERMOCHEMICAL HYDROGEN PRODUCTION. A. Odukoya, G.F. Naterer, M.A. Rosen	141 - PREPARATION OF NI- BASED CATALYSTS TO PRODUCE HYDROGEN FROM GLYCEROL BY STEAM REFORMING PROCESS. M. Yurdakul, N. Ayas, K. Bizkarra, M. El-Doukkali, J.F. Cambra	1003 - EVALUATION OF PHOTOELECTRODE COATING MATERIALS AND METHODS FOR PHOTOELECTROCHEMICAL HYDROGEN PRODUCTION. C. Acar, I. Dincer
	127 - POLYANILINE COMPOSITE MEMBRANES FOR HYDROGEN PRODUCTION IN CU-CL THERMOCHEMICAL CYCLE. N. Abdo, E.B. Easton	59 - SORPTION-ENHANCED STEAM REFORMING OF ETHANOL USING CAO-BASED SORBENT MIXED WITH IRON OXIDE CATALYST. H. Elfaki, M. Khouze, G.S. Walker	1016 - DEVELOPMENT AND ANALYSIS OF A NEW LIGHT-BASED HYDROGEN PRODUCTION SYSTEM. S. Ghosh, I. Dincer
	79 - X-RAY DIFFRACTION OF CRYSTALLIZATION OF COPPER (II) CHLORIDE FOR IMPROVED ENERGY UTILIZATION IN HYDROGEN PRODUCTION. O.A. Jianu, M. Lescisin, Z. Wang, M.A. Rosen, G.F. Naterer	162 - ETHANOL STEAM REFORMING: INFLUENCE OF METHOD PREPARATION ON CU AND NI BASED CATALYST. F.A. Silva, I. D. Pontes, G. T. Wurzler, M.H.N.O. Scaliante, M. DeSouza, N.R.C.F. Machado	1012 - EXERGY ANALYSIS OF A PHOTOELECTROCHEMICAL SYSTEM FOR HYDROGEN PRODUCTION. C. Casallas, I. Dincer, C. Zamfirescu
	241 - SYSTEM DEVELOPMENT FOR EVALUATING PERFORMANCE OF CORROSION RESISTANT COATINGS EXPOSED TO MOLTEN COPPER CHLORIDE SALT. K. Azarbayjani, G. Rizvi, F. Foroutan	172 - SILICA-ALUMINA COMPOSITE AS A SOLID ACID FOR HYDROGEN PRODUCTION VIA STEAM REFORMING OF DIMETHYL ETHER. S.S. Wang, Y.H. Song, H.P. Ren, X. Long, Z.T Liu, Z.W. Liu	46 - EXPERIMENTAL STUDY OF A HYBRID PHOTO-ELECTROCATALYTIC HYDROGEN PRODUCTION REACTOR. T.A.H. Ratlamwala, I. Dincer
	242 - EVALUATING EFFECTS OF IMMERSION TESTS IN MOLTEN COPPER CHLORIDE SALTS ON CORROSION RESISTANT COATINGS. K. Azarbayjani, G. Rizvi, F. Foroutan	140 - WATER-GAS SHIFT REACTION KINETICS OVER RU/C IN SUBCRITICAL WATER. O. Yilmaz, N. Ayas	1020 - EFFECT OF VARIOUS SOLAR SPECTRA ON PHOTONIC HYDROGEN PRODUCTION. Y. Bicer, I. Dincer, C. Zamfirescu
12:25pm-02:00pm	**Lunch Break**		

Time	Room (UA 2120)	Room (UA 2220)	Room (UA 2230)
02:00pm-04:00pm (120 min)	**Session 2-A: Nuclear Power and Hydrogen Thermochemical Cycles, Chair: A. E. Abasaeed**	**Session 2-B: Catalytic, Electrolysis and Reforming Technologies Chair: M. Agelin-Chaab**	**Session 2-C: Novel Hydrogen Production Systems, Chair: A. H. Fakeeha**
	312 - CONTINUOUS MELTING AND QUENCHING OF MOLTEN SALTS IN THERMOCHEMICAL HYDROGEN PRODUCTION PROCESSES. K. Gabriel, A. Liang, K. Ng, O. Jianu, Z. Wang, M. Rosen, G.F. Naterer	160 - THERMOGRAVIMETRIC ANALYSIS OF HYDROGEN PRODUCTION FROM AL-MG-LI PARTICLES AND WATER. Weijuan Yang, Xiaowei Liu, Jianzhong Liu, Zhihua Wang, Junhu Zhou, Kefa Cen	276 - SIZING OF A HYDROGEN PRODUCTION SYSTEM FOR A POWER TO GAS ENERGY HUB. U. Mukherjee, S.B. Walker, M. Fowler, A. Elkamel
	346 - EXPERIMENTAL INVESTIGATION OF CONSTITUENT SOLUBILITY IN TERNARY SYSTEMS FOR THERMOCHEMICAL CYCLES. O. A. Jianu, Z. Wang, M.A. Rosen, G.F. Naterer	81 - HYDROGEN GAS PRODUCTION FROM WASTE PAPER BY SEQUENTIAL DARK FERMENTATION AND ELECTROHYDROLYSIS. H. Argun, G. Onaran	28 - PULSED POWER FOR EFFICIENT HYDROGEN PRODUCTION. N. Monk, S. Watson
	249 - HYDROGEN PRODUCTION USING HIGH TEMPERATURE NUCLEAR REACTORS: EFFICIENCY ANALYSIS OF A COMBINED CYCLE. M. Jaszczur, M.A. Rosen, T. Sliwa, M. Dudek, L. Pieńkowski	91 - INVESTIGATION OF TIO2/CARBON ELECTROCATALYST SUPPORTS PREPARED USING GLUCOSE AS A MODIFIER. C. Odetola, B. E. Easton., L. Trevani	297 - HYDROGEN AMPLIFICATION TECHNOLOGY DEVELOPMENT USING A BY-PRODUCT GAS (HOT COG (COKE OVEN GAS)) IN THE STEEL MAKING PROCESS. S. Kimihito, N. Kenji, I. Nobuaki, D. Hitoshi, I. Toshio
	1017 - THE FOUR-STEP MAGNESIUM-CHLORINE CYCLE WITH DRY HCL CAPTURE FOR DECREASED ELECTRICAL WORK CONSUMPTION. H. Ozcan, I. Dincer	1019 - COMPARATIVE STUDY OF VARIOUS HYDROGEN PRODUCTION METHODS IN TERMS OF EMISSIONS. F. Suleman, I. Dincer, M.Agelin-Chaab	146 - SUPERCRITICAL WORKING FLUIDS FOR HYDROGEN PRODUCTION VIA INTERMEDIATE HEAT EXCHANGER. J.C. Jouvin, I. Pioro
	181 - DETAILED STUDY ON H_2SO_4 DECOMPOSITION IN THE SULFUR-IODINE CYCLE. Hui Yang, Yanwei Zhang, Zhihua Wang, Junhu Zhou, Kefa Cen	290 - PHOTOCATALYTIC-ELECTROCATALYTIC DUAL HYDROGEN PRODUCTION SYSTEM. M. Aydemir, A. Koca	199 - DRY REFORMING OF MULTIPLE BIOGAS TYPES FOR SYNGAS PRODUCTION SIMULATED USING ASPEN PLUS: THE USE OF PARTIAL OXIDATION AND HYDROGEN COMBUSTION TO ACHIEVE THERMO-NEUTRALITY. Stephen G. Gopaul, Animesh Dutta
	1030-ELECTROCHEMICAL ANALYSIS OF A CUCL ELECTROLYZER. R. Soltani, I. Dincer	1044 - EFFECT OF VARIOUS PARAMETERS ON ENERGY AND EXERGY EFFICIENCIES OF A SOLAR THERMAL HYDROGEN PRODUCTION SYSTEM. A.S. Joshi, I. Dincer, B.V. Reddy	336 - THERMAL EFFECTS ON BREAKTHROUGH CURVES OF PRESSURE SWING ADSORPTION FOR HYDROGEN PURIFICATION. J. Xiao, Y. Peng, P. Bénard, R. Chahine
04:00pm-04:20pm	**Refreshment Break**		

Time	Room (UA 2120)	Room (UA 2220)	Room (UA 2230)
04:20pm-06:00pm (100 min)	**Session 3-A: Biomass and Biological Hydrogen Production I, Chair: B. Reddy**	**Session 3-B: Gasification and Pyrolysis Processes, Chair: F. Gaspari**	**Session 3-C: Catalytic and Thermochemical Cycles, Chair: I. P. Jain**
	239 - MICROALGAE DERIVED HYDROGEN PRODUCTION ENHANCEMENT VIA GENETIC MODIFICATION. V. Kava-Cordeiro, J.V.C. Vargas	92 - HYDROGEN PRODUCTION BY SUPERCRITICAL WATER GASIFICATION OF FRUIT PULP IN THE PRESENCE OF RU/C. E. Demirel, N. Ayas	236 - HYDROGEN PRODUCTION FROM METHANE OVER LANTHANUM SUPPORTED BIMETALLIC CATALYSTS. A. Fakeeha, W. Khan, A. Al-Fatesh, A. Aidid, A. Abasaeed
	183 - BIOLOGICAL HYDROGEN PRODUCTION FROM MICROALGAE BIOMASS THROUGH COMBINED DARK- AND PHOTO-FERMENTATION. Ding Lingkan, Cheng Jun, Xia Ao, Liu Jianzhong, Zhou Junhu, Cen Kefa	118 - CO-GASIFICATION OF COAL/SEWAGE SLUDGE BLENDS TO HYDROGEN-RICH GAS WITH THE APPLICATION OF THE SIMULATED HIGH TEMPERATURE REACTOR EXCESS HEAT. A Smoliński, N. Howaniec	16 - EFFECT OF ACTIVE THERMAL INSULATION ON METHANE AND CARBON DIOXIDE CONCENTRATIONS IN THE EFFLUENT OF A CATALYTIC PARTIAL OXIDATION REACTOR FOR NATURAL GAS CONVERSION TO SYNTHESIS GAS. A. Al-Musa, S. Shabunya, V. Martynenko, V. Kalinin
	95 - BIOHYDROGEN PRODUCTION IN CONTINUOUS MULTIPLE TUBES REACTOR FROM CASSAVA FLOUR WASTEWATER. G.S. Damasceno, F.L. Tadeu, M. Tatiana, G.P.C. Feitosa, Z. Marcelo	37 - DEVELOPMENT OF CO_2-FREE PRODUCTION OF HYDROGEN BY METHANE DECARBONISATION BASED ON LIQUID METAL TECHNOLOGY. A. Abánades, T. Geißler, A. Heinzel, K. Mehravaran, G. Müller, M. Plevan, R.K. Rathnam, C. Rubbia, D. Salmieri, L. Stoppel, S. Stückrad, A. Weisenburger, H. Wenninger, T. Wetzel	147 - MODELLING AND SCALING ANALYSIS OF A SOLAR REACTOR FOR SULPHURIC ACID CRACKING IN A HYBRID SULPHUR CYCLE PROCESS FOR THERMOCHEMICAL HYDROGEN PRODUCTION. N.B. Botero, D. Thomey, A.G. Niehoff, M. Roeb, C. Sattler, R. Pitz-Paal
	25 - OPERATIONAL STRATEGIES FOR THE CONTINUOUS BIOHYDROGEN ($BIOH_2$) PRODUCTION FROM SUGARCANE STILLAGE ANAEROBIC DIGESTION. F.L. Tadeu, K.L.S. Mazine, G.M. Loureiro, Z. Marcelo	31 - EXPERIMENTAL ANALYSIS OF HYDROGEN PRODUCTION BY METHANE PYROLYSIS IN A LIQUID METAL BUBBLE COLUMN. T. Geißler, M. Plevan, A. Abánades, K. Mehravaran, R.K. Rathnam, C. Rubbia, D. Salmieri, L. Stoppel, S. Stückrad, T. Wetzel	328 - PRELIMINARY FEASIBILITY EVALUATION OF A FULLY SOLAR BASED COPPER-CHLORINE THERMOCHEMICAL CYCLE FOR HYDROGEN PRODUCTION. A. Fan, M.A. Rosen, Z. Wang
	145 - HEAT INTEGRATION ASSESSMENT FOR THE COUPLING OF HYDROTHERMAL PROCESSING OF LIPID EXTRACTED ALGAE WITH A DOWNSTREAM REFORMER FOR A CONCEPTUAL HYDROGEN PRODUCTION PLANT. M. Magdeldin, T. Kohl, M. Jarvinen	1023 - ASSESSMENT OF AN IGCC BASED TRIGENERATION SYSTEM FOR POWER, HYDROGEN AND SYNTHESIS FUEL PRODUCTION. S.S. Seyitoglu, I. Dincer, A. Kilicarslan	1018 - MULTI-OBJECTIVE OPTIMIZATION OF THE FOUR-STEP COPPER-CHLORINE THERMOCHEMICAL CYCLE FOR HYDROGEN PRODUCTION. A. Ozbilen, I. Dincer, M.A. Rosen
6:30	**Welcoming Reception (UA East Atrium)**		

TUESDAY MAY 5, 2015			
Time	**Room (UA 1350)**		
09:00am-10:30pm	Chair: K. Gabriel Keynote Lecture: Thermodynamics and Kinetics of CuCl/HCl Electrolyzer for Hydrogen Production via CuCl Thermochemical Cycle S. N. Lvov (Pennsylvania State University, USA) Keynote Lecture: Solar Hydrogen Production C. Sattler (German Aerospace Center - DLR and N.ERGHY, Germany)		
10:30am-10:50am	**Refreshment Break**		
Time	**Room (UA 2120)**	**Room (UA 2220)**	**Room (UA 2230)**
10:50am-12:30am (100 min)	**Session 4-A: Conventional and High temperature Electrolysis, Chair: C. Sattler**	**Session 4-B: Hydrogen and Combustion Engines, Chair: C. O. Colpan**	**Session 4-C: Hydrogen Integrated Energy Systems, Chair: S. N. Lvov**
	1010 - DEVELOPMENT OF A SOLAR TOWER BASED INTEGRATED SYSTEM FOR HYDROGEN PRODUCTION. A. Alzahrani, I. Dincer	187 - EFFECT OF USING HYDROXY-CNG FUEL MIXTURES IN A NON-MODIFIED DIESEL ENGINE BY SUBSTITUTION OF DIESEL FUEL. H.T. Arat, M.K. Baltacioglu, M. Özcanlı, K. Aydın	240 - INTEGRATION OF TRANSPORTATION ENERGY PROCESSES WITH A NET ZERO ENERGY COMMUNITY USING CAPTURED WASTE HYDROGEN FROM ELECTROCHEMICAL PLANTS. S. Garmsiri, S. Koohi-Fayegh, M.A. Rosen, G.R. Smith
	1005 - THERMODYNAMIC PERFORMANCE ASSESSMENT OF SOLAR- DRIVEN INTEGRATED HTSE FOR SUSTAINABLE HYRDOGEN PRODUCTION. M.T. Balta, O. Kizilkan, F. Yilmaz	190 - EXPERIMENTAL COMPARISON OF PURE HYDROGEN AND HHO (HYDROXY) ENRICHED BIODIESEL (B10) FUEL IN A COMMERCIAL DIESEL ENGINE. M.K. Baltacioglu, A.H. Turan, M. Özcanlı, K. Aydın	1002 - SUSTAINABILITY ASSESSMENT OF A WIND-HYDROGEN SYSTEM. K. Hacatoglu, I. Dincer, M.A. Rosen
	133 - INVESTIGATION OF HYDROGEN PRODUCTION FROM INDUSTRIAL WASTE HEAT BY THE METHOD OF HIGH TEMPERATURE ELECTROLYSIS. E. Toklu, A.C. Avci, K. Kaygusuz, K. Ermis	1031- ANALYSIS AND ASSESSMENT OF HYDROGEN ASSISTED HYBRID LOCOMOTIVES. J. Hogerwaard, I. Dincer	250 - ECONOMIC ANALYSIS OF STANDALONE HYBRID ENERGY SYSTEMS FOR APPLICATION IN TEHRAN, IRAN. F. Fazelpour, N. Soltani, M. Shariatzadeh, M.A. Rosen
	221 - INTEGRATION OF RENEWABLE ENERGY SOURCES INTO COMBINED CYCLE POWER PLANTS THROUGH ELECTROLYSIS GENERATED HYDROGEN IN A NEW DESIGNED ENERGY HUB. K. Al Rafea, M. Fowler, A. Elkamel, A. Hajimiragha	36 - EXERGETIC SUSTAINABILITY IMPROVEMENT POTENTIALS OF A HYDROGEN FUELLED TURBOFAN ENGINE UAV BY HEATING ITS FUEL WITH EXHAUST GASSES. N. Kaya, O. Turan, A. Midilli, T.H. Karakoç	255 - STUDY ON HYBRID POWER PLANT WITH HYDROGEN RICH SYN GAS. T. Srinivas, B.V. Reddy
	1013 – ANALYSIS OF AN INTEGRATED HYDROGEN ENERGY SYSTEM. F. Khalid, I. Dincer, M. Rosen	35 - EXERGETIC SUSTAINABILITY ASSESSMENT OF A HYDROGEN FUELLED TURBOFAN ENGINE UAV. N. Kaya, O. Turan, T.H. Karakoç, A. Midilli	387 - MODELING AND SIMULATIONS OF FUEL CELL SYSTEMS FOR COMBINED HEAT AND POWER GENERATION. K. Kang, H. Yoo, D. Han, A. Jo, H. Ju
12:30pm-02:10pm	**Lunch**		

Time	Room (UA 2220)	Room (UA 2230)
02:10pm-04:10pm (120 min)	**Session 5-A: Hydrogen Energy and Hydrogen Economy, Chair: N. Ayas**	**Session 5-B: Membrane and Electrodes Technology, Chair: M. Aydin**
	82- PROGRESS OF THE IAHE NUCLEAR HYDROGEN DIVISION ON INTERNATIONAL HYDROGEN PRODUCTION PROGRAMS. A. Odukoya, G.F. Naterer, M. Roeb, C. Mansilla, J. Mougin, B. Yu, J. Kupecki, I. Iordache, J. Milewski	64 - NANO-COMPOSITE SILICA CERAMIC MEMBRANE FOR HYDROGEN GAS SEPARATION AND PURIFICATION. N. Nwogu, M. Kajama, E. Gobina
	245 - OPTIMAL OPERATION OF AN ENERGY HUB NETWORK IN THE CONTEXT OF HYDROGEN ECONOMY. A. Maroufmashat, M. Fowler, A, Elkamel, S.K. Sourena	355 - ENERGY-EFFICIENT CERAMIC MEMBRANE DESIGN FOR H_2 AND CO_2 SEPARATION APPLICATIONS. N. Nwogu, M. Kajama, E. Anyanwu, E. Gobina
	258 - A SANKEY DIAGRAM- BASED OVERVIEW OF THE CONTEMPORARY HYDROGEN ECONOMY. A. Bakenne, W. Nuttall, S. Krishnamurthy, N. Kazantzis	1004 - MULTI-LAYER SILICA ALUMINA MEMBRANE PERFORMANCE FOR FLUE GAS SEPARATION. N. Nwogu, M. Kajama, E. Anyanwu, E. Gobina
	237 - The IMPORTANCE OF MARKET MECHANISMS IN POWER-TO-GAS SYSTEMS. D. Van Lanen, S.B. Walker, M. Fowler, U. Mukherjee	154 - HYDROGEN PERMEATION USING MACROPOROUS AND MESOPOROUS INORGANIC MEMBRANES. N.M. Kajama, N. Claribelle Nwogu, E. Gobina
	232 – START A HYDROGEN CONVERSATION. SHIFT POLITICAL WILL. J. Dalziel	164 - EFFECT OF RAW MATERIAL SOURCES ON ACTIVATED CARBON CATALYTIC ACTIVITY FOR HI DECOMPOSITION IN THE SULFUR-IODINE THERMOCHEMICAL CYCLE FOR HYDROGEN PRODUCTION. G. Fu, Z. Wang, Y. Zhang, Z. Huang, J. Liu, J. Zhou, Kefa Cen
	1029 – ASSESSMENT OF HYDROGEN PRODUCTION WITH ENHANCED CANDU 6 REACTORS INTEGRATED WITH CHEMICAL HEAT PUMP. R.S. El-Emam, I. Dincer, C. Zamfirescu	1001 - TRANSPORT PHENOMENA MODELING OF A PHOTO-ELECTROCHEMICAL REACTOR FOR HYDROGEN PRODUCTION. M.A. Qureshy, M. Ahmed, A.K. Ali, I. Dincer
04:10pm-04:30pm	**Refreshment Break**	
Time	**Room (UA 1350)**	
04:30pm-05:15pm	Chair: M.A. Rosen Keynote Lecture: International Program on Sustainable Hydrogen Production with the Thermochemical Cu-Cl Cycle G.F. Naterer (Memorial University of Newfoundland, Canada)	
05:15pm-06:15pm	**Poster Session (UA East Atrium)**	
	1015- COMPARATIVE ASSESSMENT OF VARIOUS CHLORINE FAMILY CYCLES FOR HYDROGEN PRODUCTION. M.T. Balta, I. Dincer, A. Hepbasli	1011 - SOLAR BASED ELECTROCHEMICAL SYNTHESIS OF AMMONIA AND ELECTROLYSIS OF HYDROGEN. C. Casallas, I. Dincer
	217 - CATALYTIC EFFECT OF Nb2O5 ON DEHYDROGENATION KINETICS OF $NaAlH_4$. J. Khan, I.P. Jain	68 - BIOHYDROGEN PRODUCTION BY THE PSYCHROPHILIC G088 STRAIN USING SINGLE CARBOHYDRATES AS SUBSTRAT. Alvarez-Guzmán Cecilia Lizeth, Oceguera-Contretas Edén, Ornelas-Salas Tomás, and De León-Rodríguez Antonio
	222 - CATALYTIC EFFECT OF HALIDE ADDITIVE ON HYDROGEN DESORPTION IN NaAlH4. J. Khan, I.P. Jain	1022 - GASIFICATION OF BIOMASS AND TREATMENT SLUDGE IN A FIXED BED GASIFIER. Ongen Atakan, Ozcan H. Kurtulus, Ozbas E. Emine
	1014 - DEVELOPMENT AND CONSTRUCTION OF A SOLAR CONCENTRATOR WITH SPECTRAL SPLITTING FOR POWER AND HYDROGEN PRODUCTION. D. Powell, A. Chan, S. Antonio, A. Alafaleg, T. Letsoalo, M. Gajkowski, I. Dincer	195 - INHIBITOR STUDIES ON HYDROGEN PHOTOPRODUCTION BY RHODOBACTER SPHAEROIDES. Lilit Gabrielyan, Harutyun Sargsyan, Armen Trchounian
	69 - STEAM METHANE REFORMING USING SUPPORTED NICKEL CATALYST: EFFECT OF NICKEL CONTENT FOR HYDROGEN PRODUCTION. A. Belhadi , O. Cherifi	1027 - DEVELOPMENT OF THE STAND-ALONE REFORMER FOR ON-SITE HYDROGEN PRODUCTION. Jung-Il Yang, Tae Wan Kim, Ji Chan Park, Tak-Hyung Lim, Heon Jung, Dong Hyun Chun
6:30	**Bus Leaves South Village Residence for Conference Banquet at Trillium Trails**	

WEDNESDAY MAY 6, 2015		
Time	**Room (UA 2220)**	**Room (UA 2230)**
9:00am-10:20am (80 min)	**Session 6-A: Novel Hydrogen Storage Technologies, Chair: Z. Wang**	**Session 6-B: Biomass and Biological Hydrogen Production II, Chair: A. Dutta**
	124 - MSM HYDROGEN SENSOR INTEGRATED WITH HBT AMPLIFIER FOR HYDROGEN SAFETY PAPER. L. Hao, L. Chieh, T.S Wei, T.J. Hui, L.W. Shiung	186 - IMPROVEMENT OF FERMENTATIVE HYDROGEN PRODUCTION FROM LIGNOCELLULOSIC BIOMASS USING GENETICALLY MODIFIED BACTERIA. Song Wenlu, Cheng Jun, Ding Lingkan, Liu Jianzhong, Zhou Junhu, Cen Kefa
	238 - BENCHMARKING OF POWER-TO-GAS AS AN ENERGY STORAGE ALTERNATIVE. S.B. Walker, U. Mukherjee, M. Fowler, A. Elkamel	144 - ESCHERICHIA COLI GROWTH AND HYDROGEN PRODUCTION UPON GLYCEROL FERMENTATION AT SLIGHTLY ACIDIC pH: EFFECTS OF FORMATE AND SOME HEAVY METAL IONS. K. Trchounian, A. Vardanyan, A. Poladyan, A. Trchounian
	76 - EXPERIMENTAL AND SIMULATION STUDY ON STRUCTURAL CHARACTERIZATION AND HYDROGEN STORAGE OF METAL-ORGANIC STRUCTURED COMPOUND. Z. Ozturk, G. Ozkan, D.A. Kose, A. Asan	193 - BIOHYDROGEN PRODUCTION FROM BIODIESEL INDUSTRY WASTE BY USING A CO-CULTURE OF ENTEROBACTER AEROGENES AND CLOSTRIDIUM BUTYRICUM. V.L. Pachapur, S.J. Sarma, S. K. Brar, Y.L. Bihan, G. Buelna, M. Verma
	163 - EFFECT OF LITHIUM DOPING ON HYDROGEN STORAGE CAPACITY OF HEAT WELDED RANDOM CNT NETWORK STRUCTURE. C. Baykasoglu, Z. Ozturk, M. Kirca, C.T. Alper, A. Mungan, C. Alberto	97 - INFLUENCE OF ORGANIC LOADING RATE AND INOCULUM SOURCE ON THE HYDROGEN PRODUCTION FROM CASSAVA STARCH WASTEWATER. D.M.L. Shaiane., A.L. Cristiane, G.B. D. T.D.G. Simone
10:20am-10:40am	**Refreshment Break**	
Time	**Room (UA 2220)**	**Room (UA 2230)**
10:40am-12:20pm (100 min)	**Session 7-A: Fuel Cell Technology, Chair: O. Kizilkan**	**Session 7-B: Novel Hydrogen and Energy Systems, Chair: D. A. Kose**
	1026 - INVESTIGATING THE EFFECT OF ACTIVE AREA ON THE PERFORMANCE OF A DIRECT METHANOL FUEL CELL THROUGH CFD ANALYSIS. U. Gencalp, O. Kadem, M.A. Ezan, C.O. Colpan	142 - HYDROGEN PRODUCTION FROM TEA WASTE. T. Esen, N. Ayas
	1025 - MULTIPHYSICS MODELING OF A DIRECT METHANOL FUEL CELL AND ITS EXPERIMENTAL VALIDATION. O.F. Atacan, M. Ercelik, A. Ozden, C.O. Colpan	244 - IMPROVEMENT OF HYDROGEN PRODUCTION FROM GLYCEROL IN MICRO-OXIDATIVE ENVIRONMENT. F. Paillet, F. Silva-Illanes, A.M.E. Tapia-Venegas, L. Cabrol, N. Bernet, J.P. Steyer, G. Ruiz-Filippi, E. Trably
	132 - A NUMERICAL ANALYSIS OF THE EFFECT OF DUAL CELL BIPOLAR PLATE IN POLYMER ELECTROLYTE FUEL CELLS (PEFCS). A. Jo, H. Ju	226 - EXPERIMENTAL INVESTIGATION OF THE EFFECT OF SIMULTANEOUS NITROGEN, HYDROGEN AND EGR ADDITION IN BIODIESEL OPERATED CI ENGINE. R. Senthilkumar, M. Loganathan, E.James Gunasekaran
	104 - NUMERICAL STUDIES OF PHOSPHORIC ACID LEAKAGE PROBLEM IN HIGH-TEMPERATURE PROTON EXCHANGE MEMBRANE FUEL CELLS (HT-PEMFCS). S. Won, K. Oh, H. Ju	1028 - EXPERIMENTAL AND FIRST-PRINCIPLES DFT STUDY ON CORRELATION BETWEEN ENHANCED ELECTRON TRANSFER AND OXYGEN VACANCIES ON CERIUM DIOXIDE. Huang Ying, Yan Chang-Feng, Guo Chang-Qing, Huang Shi-Lin, Shi Yan, Xu Yi-Tao
	389 - NUMERICAL INVESTIGATION OF VARIATION OF HYDROPHOBICITY IN DIFFUSION MEDIA IN DIRECT METHANOL FUEL CELLS. G. Gwak, K. Lee, S. Ferekh, S. Lee, H. Ju	101 - OPTIMIZATION OF SEMICONDUCTOR NS-TIO2-CUO ADMIXED PHOTOELECTRODE FOR PHOTOELECTROCHEMICAL SOLAR CELL IN REGARD TO HYDROGEN PRODUCTION. Mridula Tripathi, Priyanka Chawla
		102 - SURFACE MODIFICATION OF SEMICONDUCTOR PHOTOANODE FOR PHOTOELECTROCHEMICAL WATER SPLITTING. Priyanka Chawla, Mridula Tripathi
12:30 pm	**End of Conference and Farewell Lunch**	