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Foreword

Since the last WHEC Conference held two years ago in Stuttgart, Germany, the Hydrogen Energy System is making inroad in several direction. All the major car companies have announced that early in the **2000s**, starting 2004, they will market hydrogen **fueled** automobiles. Some cities have started demonstration projects using hydrogen **fueled** transit buses. Long lasting, light and clean metal hydride batteries are already commercial for laptop computers. Larger capacity batteries are being developed for electric cars. Phosphoric acid and alkaline fuel cells are already **commercialized** for electric power generation. There is intensive research and development works going on for other types of fuel cell generators, such as molten carbonate **fuel** cells, solid oxide fuel cells, and proton exchange membrane fuel cells. Of course, hydrogen is already being used as the fuel of choice for space programs around the world. It will be used to power aerospace transports to build the international space station, as well as to provide electricity and potable water for its inhabitants.

In addition, there is extensive R & D work covering all aspects of the Hydrogen Energy System around the world. The 12 WHEC Conference will provide a focus on these activities by way of its program, presentations and discussions. All facets of the hydrogen energy system will be authoritatively covered. During the four-day event, there is to be an appropriate mix of topical sessions (sessions on primary energy sources, production, storage, transmission, utilization, environmental effects, and economics) in which invited lecturers and formal papers are presented. It is expected that the 12th World Hydrogen Energy Conference will be a landmark event in the world's accelerating search for new clean and abundant sources of energy. Appropriately, the theme of the meeting is "Hydrogen for the World".

The proceedings present by in an orderly format the lectures and papers to be presented at the 12th World Hydrogen Energy Conference, with the exception of those which did not reach the editors on time. The latter will be considered for publication in the International Journal of Hydrogen Energy. It is expected that these proceedings will serve as reference in covering the latest developments in the field of Hydrogen Energy.

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Volume 1

CHAPTER 1 Transition to Hydrogen-based Energy Systems

- Fuel Cell Propulsion for Urban Duty Vehicles - Bavarian Fuel Cell Bus Project. 3
R. Wurster, M. Altmann, D. Sillat, H.J. Drewitz, K. W. Kalk Ch. Gruber, A. Hammerschmidt, W. Stühler, E. Holl (Germany)
- Investigations in the Solar Energy Conversion to Hydrogen Energy in the Republic of Armenia 13
V.M. Aroutiounian (Armenia)
- Potential and Costs of Electrolytical Hydrogen Production by Secondary Energy in Brazil. 23
S.N.M. De Souza, E. P. Da Silva (Brazil)
- Potential for Air Quality Improvement in the Tokyo Metropolitan Area from Use of Hydrogen Fuel. 33
P. Kruger, M. Murdock, T. Hirai, K. Okano (USA/Japan)
- Solar Hydrogen Project at Nasser Lake in the South of Egypt. 45
M.A.M. Shaltout (Egypt)
- Generation and Use of Hydrogen for the Supply of the Cane to the Sugar-Cane Industry. 55
A. Valdés (Cuba)
- Potential for Solar Hydrogen Production in the Mediterranean Area Using a Central Receiver System. 65
F. Rosa, V. Fernández, F. Isorna, E. López (Spain)
- Development of Guidelines for the Design of Integrated Hydrogen Systems. 75
A. de Groot, M. Bracht, C.E. Gregoire Padro, T.H. Schucan, E. Skolnik (The Netherlands/USA/Switzerland)
- The Integration of Secondary Energy and Natural Gas by Hydrogen. 87
S N.M. De Souza, E.P. Da Silva (Brazil)
- The Air Quality Control and the Air Monitoring Systems. 95
O. Garcia Peyrano, M. Caputo (Argentina)

Solar Hydrogen as a Transportation Fuel: Application to a Sensitive Environmental Site.	103
<i>E. López, F. Rosa, F. Isorna (Spain)</i>	
Development of Hydrogen Technology Component Models for Systems Integration.	111
<i>T.H. Schucan, E. Skolnik, M. Bracht, C.E. Gregoire Padró (Switzerland/USA/The Netherlands)</i>	
Economic Aspects	
Why Hydrogen Makes Sense as a Motor Fuel of the Future - With or Without Global Warming.	121
<i>A. Lloyd, G. Rambach, A. LaVen, R. Rose (USA)</i>	
Hydrogen-based Systems as reply of El Niño Problem in Colombian Energy Sector.	131
<i>V.V. Kafarov, L. Acevedo Duarte (Colombia)</i>	
Newly Emerging Opportunities for Pollution Reduction Using Hydrogen as Vehicular Fuel.	143
<i>T. Krepec, H. Hong</i>	
Biological Hydrogen Production as an Environmentally Friendly Technology.	153
<i>K. Takasaki, S. Otsuka, T. Hattori (Japan)</i>	
A Feasibility Study of Conceptual Design for International Clean Energy Network using Hydrogen Conversion Technology.	159
<i>T. Sato, A. Hamada, K. Kitamura (Japan)</i>	
Pollution Solution Evolution. New Opportunity for Hydrogen.	169
<i>R.M. Zweig, J. Provenzano (USA)</i>	
Wind Hydrogen Production in Buenos Aires Province Eolic Resources - Demonstration Plant.	177
<i>J.C. Bolcich, M.M. Cueto</i>	
Visions and Strategies	
Comparative Costs of Hydrogen Produced from Photovoltaic Electrolysis and from Photoelectrochemical Processes.	185
<i>D.L. Block (USA)</i>	

Development of a Data Acquisition and Control System for a Small-Scale PV- H₂ System - First Design Phase. <i>J. Eriksen (Norway)</i>	195
The Introduction of Hydrogen in London and Tokyo - Costs and Strategic Issues. <i>D. Hart, D. Hutchinson (U.K.)</i>	205
Hydrogen, Hybrid and Electric Propulsion in a Strategy for Sustainable Transport. <i>K. Jorgensen (Denmark)</i>	213
The Socio-Political Aspects of the Transition to Hydrogen-Based Energy S y s t e m s . <i>E. Gladstone (USA)</i>	223
Carbon Trading and Hydrogen - Possibilities and Pitfalls. <i>R. E. Ayres, R.K. Rose, A. C. Lloyd, R. Wichert (USA)</i>	231
System Comparison of Hydrogen with other Alternative Fuels in Terms of EPACT Requirements. <i>K. Ozay, T.N. Veziroglu, F. Barbir (USA)</i>	241
Energy Supply and Conversion to Hydrogen: How to Improve the Air Quality in Buenos Aires City. <i>N.R. Venturini, J. Bergallo, H.L. Corso, J. C. Bolcich (Argentina)</i>	271
HyWeb - The Hydrogen and Fuel Cell Information System. Publication of a Hydrogen Acceptance Study in HyWeb as an Example of the Dissemination of Hydrogen Information via the Internet. <i>M. Altmann, R. Wuster, C. Grasel (Germany)</i>	281
Implementing the Hydrogen Commercialization Plan. <i>R.L. Mauro, K.I. Miller</i>	291
Reconsideration of Air/Fuel Ratios for Thermal Management of Tubular Solid Oxide Fuel Cells, <i>C. Haynes (USA)</i>	301
Wind Potential Availability for the Production of Hydrogen in the Canary Archipelago. <i>J. Garcia Latorre, A. Gomez Gotor, M. Perdomo Machín (Spain)</i>	307

Zero-Emission Transport Systems Based on Hydrogen Fuel from Renewable Energies. <i>M. Altmann, M. van Brummelen, K. Blok, R. Steinberger-Wilckens, K. Stolzenburg, R. Wurster (The Netherlands/Germany)</i>	313
Urban Buses: A Market Opportunity for Hydrogen in the USA. <i>J. S. Cannon (USA)</i>	325
Exploring the Technical and Economic Feasibility of Producing Hydrogen from Sunlight and Wind. <i>M. K. Mann, J.P. DiPietro, J.J. Iannucci, J. M. Eyer (USA)</i>	3 3 7
An Examination of the Criteria Necessary for Successful Worldwide Deployment of Isolated, Renewable Hydrogen Stationary Power Systems. <i>G.D. Rambach, J.D. Snyder (USA)</i>	347
Use of Barrier and Attractor Analysis for Identifying Hydrogen System Opportunities with Illustrations in Latin America. <i>W. R. Merida, D. Sanborn Scott (Canada)</i>	357
International and National Programs and Projects	
Argentina, The 21st. Century Kuwait - Patagonian Wind “Exported” as Liquid Hydrogen. <i>E. Spinadel, F. Gamallo, S.L. Gracia Nuñez, P. Spinadel, M. Cerviño (Argentina)</i>	369
CanarHy - Canary Renewables & Hydrogen Project. Towards a Clean and Sustainable Energy System in the Canary Islands - Hydrogen as a Vector. <i>A. Gómez Gotor, A. González Garcia-Conde, R. Luque Berruezo, J. Pérez Peces, J. Garcia Latorre, M. Perdomo Machín (Spain)</i>	377
The Icelandic-German Hydrogen Project. <i>H. Gretz, H. Albert, D. Allers, T. Breitzkreuz, W. Fürwentsches, J. Gret., M. Meybauer, T. Mucha, O. Weinmann (Germany)</i>	387
The United States Department of Energy’s Hydrogen Program - Perspectives from the Hydrogen Technical Advisory Panel (HTAP). <i>C. Bailey, M. Kamal, A. Lloyd, F. Lynch, D. Nahmias, R. Zalosh (USA)</i>	395
The Use of a Liquid Hydrogen Bus in a Public Transport System. <i>K. Matthes, H. Knorr, D. Sillat (Germany)</i>	405

Solar-Hydrogen: An Energy System for Sustainable Development in Spain. <i>A. Contreras, J. Carpio, M. Molero, T.N. Veziroglu (Spain/USA)</i>	415
Evaluation of a 5 kW_p Photovoltaic Hydrogen Production and Storage Installation for a Residential Home in Switzerland. <i>P. Hollmuller, J.M. Joubert, B. Lachal, K. Yvon (Switzerland)</i>	423
Integration of Hydrogen into Energy Supply Systems. <i>G. Newi, O. Weinmann (Germany)</i>	445
Research and Development Activities on Hydrogen Technology in Switzerland. <i>A. Reller (Switzerland)</i>	455
Feasibility Study for R & D Hydrogen Fuel Cell Bus Project in China. <i>B. De You (R.P. China)</i>	463
European Integrated Hydrogen Project (EIHP). <i>C. Devillers, K. Pehr, J.S. Duffield, O. Weinmann, H. Vandenborre, A. Gonzalez Garcia C., R. Wurster, M. Kesten, F. Heurtaux, P. Ekdunge (France/Germany/Italy/Belgiun/Spain/Sweden)</i>	469
The Role of Hydrogen in Energy Supply of the County of Split and Dalmatian Islands. <i>R. Vujcic, Z. Josipovic, F. Matejcic, F. Barbir (Croatia/USA)</i>	483
Status Report on the Demonstration Phases of the Euro-Quebec Hydro-Hydrogen Pilot Project (EQHPP). <i>A. Bahbout, D. Kluskens, R. Wurster (Italy/Canada/Germany)</i>	495
 CHAPTER 2 Technologies of Hydrogen Production	
Effects of Temperature on the Performance of Cu-Ni Oxygen Anodes in Alkaline Solution. <i>M. Abdulsalam, U. Dawoud (Saudi Arabia)</i>	513
CO ₂ Free Production of Hydrogen by Catalytic Pyrolysis of Hydrocarbon Fuels for Transportation. <i>N.Z. Muradov (USA)</i>	523
Continuos Generation of Hydrogen from Sewage Sludge.	533

<i>S. Roychowdhury, D. Cox, M. Nag, T. Hamill (USA)</i>	
Hydrogen Production from Gasified Biomass by Sponge Iron Reactor (SIR). <i>V. Hacker, H. Fuchs, R. Fankhauser, B. Spreitz, K. Friedrich, G. Faleschini (Austria)</i>	543
First Operation Results of a Small Scale Sponge Iron Reactor (SIR) for Hydrogen Production. <i>R. Fankhauser, V. Hacker, B. Spreitz, K. Kleindienst, H. Fuchs, A. Rabel, K. Friedrich, G. Faleschini (Austria)</i>	551
Helium Detection During Electrolytic Hydrogen Production. <i>E. Peres da Silva, N. Pimenta Neves Jr., M. Ballester Ferreira Santos (Brazil)</i>	555
Kinetics and Mechanism of Hydrolysis of a Ca Pellet in the UT-3 Thermochemical Cycle for Hydrogen Production. <i>T. Sato, M. Sakurai, Y. Matsumura, A. Tsutsumi, K. Yoshida (Japan)</i>	561
Hydrogen Production from Hydrogen Sulfide using Membrane Reactor. <i>H. Ohya, M. Aihara, H. Ohashi, Y. Negishi (Japan)</i>	571
Preparation, Structure and Reactivity of Ca-Pellets for the UT-3 Thermochemical Hydrogen Production Cycle. <i>T. Sato, M. Sakurai, Y. Matsumura, A. Tsutsumi, K. Yoshida (Japan)</i>	581
Properties and Application of the Zirfon® Separator for Use in Alkaline Electrolysers. <i>Ph. Vermeiren, W. Adriansens, J.P. Moreels, R. Leysen (Belgium)</i>	589
Ni-Fe-Zn as Cathode Material for the Production of Hydrogen by Water Electrolysis. <i>E.R. Gonzalez, M. J. Giz, S. C. Bento (Brazil)</i>	599
The Hydrogen Evolution Reaction on LaNiO_3 Cathodes. <i>R. C. Rosim, E.R. Gonzalez (Brazil)</i>	607
Natural Gas Decarbonization Technology for Mitigating Global Warning. <i>M. Steinberg (USA)</i>	615
Hydrogen from Fossil Fuels	
Comparative Analysis of Various Pyrolysis and Conversion of Natural Gas Methods. <i>E.E. Shpilrain, V.Y. Shterenberg, V.M. Zaitchenko (Russia)</i>	625

KV AERNER Based Technologies for Environmentally Friendly Energy and Hydrogen Production.	637
<i>S. Lynum, R. Hildrum, K Hox, J Hugdahl (Norway)</i>	
A temperature-Pressure Swing Methanation Process for the Recovery of Carbon Oxides by Using Fluorinated Hydriding Alloys.	647
<i>K. Iwata, Y Komazaki, M Uchida, S. Suda (Japan)</i>	
Steam-Methanol Reforming Over Zeolitic Materials.	661
<i>M. Laniecki, K. Kazmierczak-Rosik (Poland)</i>	
Rapid Steam Reforming of Volatiles from Flash Coal Pyrolysis over Simultaneously Formed Char as Catalyst.	669
<i>J.I. Hayashi, Y. Tomioka, T. Shimada, H. Takahashi, H. Kumagai, T. Chiba (Japan)</i>	
Plasmacatalysis Hydrogen Production from Methane.	679
<i>A. Babaritskiy, I. Baranov, S. Dyomkin, C. Etievant, V. Jivotov, B. Potapkin, V. Rusanov, E. Ryazantsev (Russia/France)</i>	
Plasmachemical Hydrogen Production from Natural Gases Containing Hydrogen Sulfide.	683
<i>A. Bagautdinov, V.K. Jivotov, Y. Eremenko, I. A. Kalachev, A. I. Kozbagarov, E. I. Konstantinov, S.A. Musinov, K. I. Ovrchuk, V.D. Rusanov, V.A. Zoller (Russia)</i>	
Hydrogen Generation in the Water-Gas Shift Reaction Over Sulfided Catalysts.	691
<i>M. Malecka-Grycz, F. Domka, M. Laniecki (Poland)</i>	
Electrolysis	
Recent Developments in Electrode Materials for Water Electrolysis.	701
<i>L.A. Avaca, S.A.S. Machado, J.L. Cerne, F.C. Crnkovic, H.B. Suffredini (Brazil)</i>	
Improved Electrodes for Water Electrolysis.	711
<i>L. N. Kulikova, V. N. Fateev, V. D. Rusanov (Russia)</i>	
Electrocatalysis and Non-faradaic Promotion in Heterogeneous Catalysis (NEMCA): Hydrogen Electrode Reactions. Its Hydridic Behaviour and Chemical Oxidation.	717
<i>V.V.. Krstajic, M.M. Jaksic (Yugoslavia)</i>	

Uses of Simple Electrochemical Methods for Production and Characterization of Composite Materials for HER.	739
<i>E. Peláez, M. Trueba, H. González, C. Nuñez, M. Valdés, M. Fernández (Cuba)</i>	
Development of 2500 cm₂ Solid Polymer Electrolyte Water Electrolyzer in WE-NET.	747'
<i>M. Yamaguchi, T. Shinohara, H. Taniguchi, T. Nakanori, K. Okisawa (Japan)</i>	
Hydrogen-Production by a Windmill Powered Electrolyser.	757
<i>F. Menzl, M. Wenske, J. Lehmann (Germany)</i>	
Electrodeposited Cobalt Oxides for Alkaline Water Electrolysis.	767
<i>E.B. Castro, C.A. Gervasi (Argentina)</i>	
An Autonomous Wind-Hydrogen System for Electricity Services to Isolated Locations.	777
<i>F. Menzl, E. Spinadel (Germany/Argentina)</i>	
Thermochemical Cycles	
Technical Evaluation of Adiabatic UT-3 Thermochemical Hydrogen Production Process for an Industrial Scale Plant.	783
<i>Y. Tadokoro, O. Sato, T. Yamaguchi, K. Endo, H. Kemeyama, K. Yoshida (Japan)</i>	
Solar Thermochemical Production of Hydrogen using Metal Oxide Redox Systems.	793
<i>A. Steinfeld, A. Reller (Switzerland)</i>	
Solar Hydrogen from Manganese Oxide - A New Thermochemical Cycle.	801
<i>M. Sturzenegger, J. Ganz, P. Nüesch, Th. Schelling (Switzerland)</i>	
UT-3 Thermochemical Hydrogen Production Process Driven by Conventional Heat Sources.	807
<i>K. Yoshida, Y. Matsumura, T. Sato, A. Tsutsumi, K. Yamada, S. Shimizu (Japan)</i>	
Solar Reactor for Themtochemical and Hybrid Cycles for Hydrogen Production.	817
<i>H. Romero-Paredes, A. Torres, J.J. Ambriz (Mexico)</i>	

Other Technologies

- Prospects of Biological Hydrogen Production in Cuba. 827
L. Travieso, F. Benítez, M. Hernández (Cuba)
- H₂ Production using Semiconductor Photoelectrodes, Prepared by Screen Printing. 833
A.M. Fernández, L.G. Arriaga (Mexico)
- Accumulation Solar and Wind Energy to Synthetic Energy Carriers (H₂, CO, CH).** 841
Sh. D. Schachbazov (Azerbaijan)
- The Advanced Process of Hydrogen Production. 845
D.L. Astanovsky, L.Z. Astanovsky (Russia) .

Volume 2

CHAPTER 3 Technologies of Hydrogen Storage and Transport

- Hydrogen Storage and Supply Systems on Hydroreacting Composition Base. 855
V. Krivtsova (Ukraine)
- Coupled Ammonia-Salt/Metal Hydride Sorption Device. 865
E. Willers, M. Groll (Germany)
- Stationary Storage Systems**
- The Solar-Hydrogen Saphys Project: Operating Results.** 877
S. Galli (Italy)
- Cycling Performance of Metal Hydride - Air Rechargeable Cells. 887
S. Gamburgzev, A.J. Appleby, A. Visintin (USA/Argentina)
- Technical and Economical Practicability of Carbon Nanostructures Hydrogen Storage Systems. 893
H. Klos, W. Schütz (Germany)
- Simulation and Evaluation of a Hydrogen Storage System using Hydrogen Storage Alloy for a Chemical CO₂ Fixation and Utilization System. 899
K. Nishimura, C. Inazumi, K. Oguro, I. Uehara, S. Fujitani, K. Nishio (Japan)

Structural and Technological Features of Ground Fuel Supply of Civil Aviation Airports with Liquid Hydrogen. <i>S. K. Postoiiev, A.M. Dotnashenko</i>	907
Optimisation of Seasonal Energy Storage in Stationary Systems with Liquid Hydrogen Carriers, Decalin and Methylcyclohexane. <i>E. Newson, T.B. Truong, P. Hottinger, F. von Roth, Th. Schucan (Switzerland)</i>	935
Mobile Storage Systems	
Analysis of Hydrogen Vehicles with Cryogenic High Pressure Storage. <i>S.M. Aceves, G.D. Berry (USA)</i>	943
Catalyst Screening for Hydrogen Production in Mobile Systems by the Partial Oxidation of Methanol or Hydrocarbons. <i>E. Newson, E. Uenala, K. Geissler, P. Hottinger, T. B. Truong, F. von Roth (Switzerland)</i>	953
Adding New Hydrogen to the existing Gas Infrastructure in the Netherlands, using the Carbon Black and Hydrogen process. <i>R.A. Wijbrans, J. M. van Zutphen, D.H. Recter (The Netherlands)</i>	963
Physico-chemical Storage	
Temperature Dependence of the Long-Term Degradation Behaviour of LANI_5 and $\text{LANI}_{4.7}\text{AL}_{0.3}$. <i>M. Wanner, T. Oberle, E. Willers, M. Groll (Germany)</i>	969
Performance Study of Hydrogen Adsorption Storage Systems. <i>R. Chahine, P. Btnard (Canada)</i>	979
Electrochemical Quartz Crystal Microbalance (EQCM) Viscoelastic Studies of Nickel Hydroxide Electrodes for Metal-Hydride Batteries. <i>R.A. Etchenique, E.J. Calvo (Argentina)</i>	987
Evaluation of the Heat of Solution of Hydrogen in Metals using the Jellium Model. <i>J.L. Gervasoni, M.J. Maresca, J.O. Sofo, J.P. Abriata (Argentina)</i>	997

Anelastic Studies in a Magnesium Composite Containing Hydrided Laves Phase Particles.	1005
<i>A.A. Ghilarducci, H.A. Peretti, H. L. Corso, H.R. Salva, J.C. Bolcich (Argentina)</i>	
Kinetics of Hydrogen Absorption of Al-Doped MmNi₅.	1015
<i>G.E. Fernández, D. Rodriguez, G. Meyer (Argentina)</i>	
Hydrogen Evolution on the Ni-P Alloy. A Study of Reaction Mechanisms.	1025
<i>T. Burchardt, T.Valand (Norway)</i>	
Wire and Strip Form Specimens of Pd₈₁Pt₁₉ Alloys as Monitors of Hydrogen Solubility and Hydrogen Chemical Potential.	1033
<i>F.A. Lewis, K. Kandasamy (Ireland/Sri Lanka)</i>	
Study of Hydrogen Content in Hydrogenated FeTi Thin Films using ERDA.	1037
<i>I. P. Jain, B. Devi, P. Sharma, A. Williamson, Y.K. Vijay, D.K. Avasthi, A. Tripathi (India)</i>	
Hydrogen and Sulphur Production by Indirect Electrolysis of Hydrogen Sulphide.	1047
<i>Y. Ying, Y. Yingtao, W. Fei, Z. Yongfeng (China)</i>	
Cyclic Charge and Discharge Stability of Nanocrystalline Mg₂Ni Alloy.	1055
<i>Z. Dehouche, J. Goyette, T.K. Bose, S. Boily, J. Huot, R. Schulz (Canada)</i>	
Water Resistant Metal Hydrides Encapsulated in Hydrophobic Ceramic Shells.	1065
<i>N. Nishimiya, M. Suzuki, T.Wada, A. Matsumoto, K. Tsutsumi (Japan)</i>	
Kinetic and Equilibrium Properties of the Fluorinated Laves-phase Hydriding Alloys.	1075
<i>X.P. Gao, B.H. Liu, M. Imai, H. Ohta, S. Suda (Japan)</i>	
Improvement of the Activation Stage of the Hydride forming MMNi_{4.7}Al_{0.3} Alloy by Surface Flourination.	1085
<i>D.S. Rodriguez, G. Meyer (Argentina)</i>	
Temperature Dependence of the Hydride Formation Kinetics in ZRY-4.	1095
<i>G.E. Fernández, D. Rodriguez, G. Meyer (Argentina)</i>	

Hydrogen Transport and Storage Technologies using Metal Hydrides <i>T. Gamo, Y. Morita, S. Kuranaka, J. Suzuki, M. Uchida, A. Ohta, N. Itoh (Japan)</i>	1105
Investigation of Thermal Conductivity of Metal-Hydrides at One-Sided Heating. <i>K. Isayev, D. Schur (Ukraine)</i>	1115
Modeling of Hydrogen Adsorption on Activated Carbon Over the 77K to 273K Range. <i>P. Bénard, R. Chahine (Canada)</i>	1121
Experimental Investigation of a Multi-Hydride Thermal Wave Device for Simultaneous Heating and Cooling. <i>E. Willers, M. Groll (Germany)</i>	1131
Charge/Discharge Performance of the Experimental Nickel/Metal Hydride Battery. <i>M. Geng, J. Han, F. Feng, D.O. Northwood (Canada)</i>	1143
The Inner Cell Pressure Characteristics of Sealed Type Ni-MH Rechargeable Battery using Zr-Ti-Mn-V-Ni Hydrogen Storage Alloy as Anode. <i>D-M Kim, J-S. Yu, S-M. Lee, K-J. Jang, J-Y. Lee (Korea)</i>	1153
Effect of Interatomic Interaction between Hydrogen and Ruthenium on the Isotropic-Anisotropic State Transition. Hydrogen Adsorption. <i>S. Zaginaichenko, Z. Matysina, D. Schur (Ukraine)</i>	1163
Evaluation of Metal Hydride Decomposition Kinetics, Utilizing the Normalized Pressure Dependence Method. <i>M. Ron, V.M. Skripnyuk (Israel)</i>	1173
Effect of Processing Parameters on MG-Based Hydrogen Storage Materials Prepared by Mechanical Alloying. <i>K. Sapru, L. Ming, J. Evans, N.T. Stetson (USA)</i>	1183
Electrochemical Behavior of Zr-based AB ₂ Type Alloys Partially Substituted by Ti. <i>A. Visintin, H.A. Peretti, C. Tori, J.C. Bolcich, W.E. Triaca (Argentina)</i>	1193
Hydrogen Storage by Adsorption in Zeolites: Influence of Cation Exchanged in Zeolites A and X.	1201

<i>F. Darkrim, P. Malbrunot (France)</i>	
An Integrated Hydrogen Production/Storage System based on PV/Electrolysis/Metal Hydrides for Near-Term Applications. <i>K. Sapru, N. T. Stetson, S.R. Ovshinsky (USA)</i>	1211
Promotion of Fullerene Hydride Synthesis by Intermetallic Compounds. <i>B.P. Tarasov, VN. Fokin, A. P. Moravsky, Y.M. Shul'ga, VA. Yartys, D. V. Schur (Russia/Ukraine)</i>	1221
Hydrogen Transport and Distribution.	
Analysis of Shipping Hydrogen. <i>S. Belak (Croatia)</i>	1231
CHAPTER 4. Technologies of Hydrogen Utilization	
Performance Tests of a Multicell, Low Catalyst Loading, 100W PEM Fuel Cell Stack. <i>VA. Paganin, E.A. Ticianelli, E.R. Gonzalez (Brazil)</i>	1235
Evaluation Tool for Selection and Optimisation of Hydrogen Demonstration Projects. Application to a Decentralised Renewable Hydrogen System. <i>M. Bracht, A. de Groot, C.E. Gregoire Padro, T.H. Schucan, E. Skolnik (The Netherlands/USA/Switzerland)</i>	1243
Analysis of Hydrogen/Oxygen Combustor Heat Transfer and Structural Failure. <i>D. Kuhl, K. Fröhlke, O.J. Haidn (Germany)</i>	1255
Hydrogen Fueled Cell Powered Vehicle Development. <i>B.S. Oh, K. Ozay, T.N. Veziroglu (Korea/USA)</i>	1265
Ecological Low Polluting City Bus with Regeneration of Braking Energy. <i>G.A. Durán (Argentina)</i>	1281
Computational Simulation and Experimental Investigation of the Catalytic Combustion of Hydrogen on Platinum and Palladium. <i>J. Warnatz (Germany)</i>	1291
Thermodynamic Design of a Car Engine with External Hydrogen-Air Mixture Formation. <i>D. Dini (Italy)</i>	1297

Dynamic Storage of Hydrogen by Adsorption at Room Temperature and High Pressure. <i>M.Lamari, A. Aoufi, P. Malbrunot (France)</i>	1307
Toward Low NO, Hydrogen Fueled Internal Combustion Engine. <i>V. Medica, B. Frankovic (Croatia)</i>	1317
VGF (Variable Gaseous Fuel) Vehicles Using Hydrogen and Natural Gas. <i>J. Heffel, N. Hill, J.M.Norbeck, P.B. Scott (USA)</i>	1325
Performance of an Alkaline Fuel Cell System Using Three-Dimensional Electrodes. <i>T. Nakagawa, A. Tsutsumi, K. Yoshida (Japan)</i>	1333
A Solution Model for an Economically Sustainable Development. <i>W. Seifritz, B. Fritsch (Switzerland)</i>	1339
Evaluation of a Lean Burn Hydrogen Fueled Engine for Hybrid Electric Vehicles. <i>Y. Nakajima, M. Hiruma, K. Yamane, T. Shudo, S. Furuhashi, Y. Takagi (Japan)</i>	1359
Devices for the Removal of Hydrogen. <i>P. Brockerhoff; E.A. Reinecke, M. Voswinckel (Germany)</i>	1369
Testing of Fuel Cells for Automotive Applications at I.N.T.A. <i>F. Isorna, E. López, F. Rosa (Spain)</i>	1379
Determination of Hydrogen Content in Massive Samples Using Neutron Techniques . <i>J.R. Santisteban, J.R. Granada, R.E. Mayer (Argentina)</i>	1389
Rate Limiting Step Identification on Hydrogen Desorption Using Thermal Desorption Spectroscopy . <i>E.J. Castro, G. Meyer (Argentina)</i>	1399
Amount of Hydrogen and Loss of Ductility in Welded Joints of Zircaloyd. <i>L. Fernández, G. Fernández, H.L. Corso, R. Martinez, F. Tiglio, O. A. González, G. Meyer (Argentina)</i>	1409

Combustion Systems

- Evaluation of Heat Exchangers Powered by Electrolytic Hydrogen/Oxygen. 1415
M. A. Motta Sobrinho, J. Goldfarb, K.B. França (Brazil)
- Hydrogen C.I. Large Bore Four Stroke Engine: Ignition and Combustion 1425
Process Analyzed with High Speed Optical Measurement Systems.
P. Prechtel, F. Dorer, F. Mayinger, C. Vogel, V. Schnurbein (Germany)
- Hydrogen Internal Combustion Stirling Engine. 1437
S. Takahashi, H. Furutani, N. Iki, J. Hama, I. Yamashita (Japan)
- Examination of the Effects of the Presence of Some Gaseous Fuels and 1447
Preignition Reaction Products with Hydrogen in Engines.
Y.K. Wong, G.A. Karim (Canada)
- High Pressure Hydrogen Injection System for a Large Bore 4 Stroke Diesel 1457
Engine: Investigation of the Mixture Formation with Laser-Optical
Measurement Techniques and Numerical Simulations.
F. Dorer, P. Prechtel, F. Mayinger, C. Vogel, V. Schnurbein (Germany)
- Performance and NO_x Formation in a Hydrogen Premixed-Charge Engine. 1469
M. Shioji, N. Inoue (Japan)
- Combustion Properties of Stoichiometric Hydrogen-Oxygen-Steam Mixture in 1479
Steam Environment.
N. Iki, H. Furutani, J. Hama, S. Takahashi (Japan)
- The Ignition of H₂-O₂-Ar Mixture Flows with ArF Excimer Laser - The 1489
influence of the flow speed, temperature and adding of ozone.
H. Furutani, F. Liu, N. Iki, J. Hama, S. Takahashi (Japan)
- Research and Development of an Initial Model of Hydrogen Turbine 1497
Combustor for WE-NET Project in Japan.
M. Murayama, H. Toh, S. Yasu, T. Saito (Japan)
- A Study of 50 MW Hydrogen Combustion Turbines. 1505
H. Mori, H. Sugishita, K. Uematsu (Japan)
- Investigation of a Direct Injecting Hydrogen Diesel-Engine. 1515
H. Rottengruber, U. Wiebicke, G. Woschni, K. Zeilinger (Germany)

Backfire Mechanism in a Carburetted Hydrogen Fuelled Engine. <i>R. Sierens, E. Rosseel (Belgium)</i>	1537
Hydrogen Fueled Integral Combustion Engine. Its Implementation on a Renault 9 Car. <i>E. Fernández Navarro, J.C. Bolcich, E. Tagliabore, G. Widman, M. Iwan, A.J.A. Bolcich (Argentina)</i>	1547
Research and Development of Hydrogen Combustion Turbine System in World Energy Network Project in Japan. <i>T. Tsukagoshi, K. Mouri, T. Hisamatsu, M. Watanabe (Japan)</i>	1557
Analytical Studies to Optimize the Design and Operating Parameters for a Hydrogen-Fueled 4-Stroke Spark Ignition Engines. <i>J.A.A. Yamin, H.N. Gupta, B.B. Bansal, O.N. Srivastava (India)</i>	1573
Fuel Cells	
Technical Challenges in PEM Fuel Cell Development. <i>F. Barbir (USA)</i>	1589
PEMA, DLR's Membrane Fuel Cell Test Facility for Stationary and Mobile Applications. <i>A. Brinner, E. Hartmann, W. Hoyer, W. Hug, W. Schnurnberger (Germany)</i>	1597
Fuel Cells for Portable Applications. <i>A. Heinzl, R. Nolte, O. Rau, M. Zedda (Germany)</i>	1607
Fuel Cell Electric Vehicles. An Italian Project to Develop a Hydrogen Generator . <i>V. Recupero, L. Pino, M. Laganà, A. Ciancia, A. Jacobazzi (Italy)</i>	1611
Experience with an Alkaline Fuel Cell Stack: Test Plant, Measurements and Analysis of the Results . <i>A. Vegas, C. Garcia, A. González (Spain)</i>	162 1
A Rapid Fill Hydrogen Fuel Station for Fuel Cell Buses. <i>V. Raman, D. Farese, J. Hansel, F. Lynch (USA)</i>	1629
A Novel Hybrid Power Source Incorporating a PEM Fuel Cell Stack for Frigid-Zone Applications. <i>J. Cargnelli, R.B. Gopal, P. Rivard, T.K.. Bose(Canada)</i>	1643

Characterization and Innovative Production Technique for PEFC and DMFC Electrodes. 1653

E. Gülzow, A. Helmbold, N. Wagner, R. Reißner, M. Schulze, W. Schnurnberger (Germany)

Cycling Performance of Metal Hydride - Air Rechargeable Cells. 1663

S. Gamburgzev, A.J. Appleby, A. Visintin (USA/Argentina)

Air and Space Projects

Cryogenic Fuel Aviation Complex as the Basis for Using Liquid Hydrogen in Civil Aviation. 1671

S.K. Postoiev, VS. Streliaev (Russia)

Systems Modelling and Simulation

Compressibility Factor for Mixtures of Natural Gas and Hydrogen: Comparison Between Experimental and Calculated Values Using Supertrapp 1679

A. Hourri, R. Okambawa, P. Bénard, T.K. Bose (Canada)

Lessons Learnt from the Experiments with EQHHPP Model Tank. 1689

U. Schmidtchen, G. Würsig, N. Wöhren, E. Behrend (Germany)

Design of an Isolated Wind-Hydrogen Energy Supply System. 1699

M. Altmann, F. Gamallo (Germany/Argentina)

Transport Phenomena in Two Dimensional Hydrogen-Oxygen PEM Fuel Cells. 1707

V. Gurau, H. Liu (USA)

Mathematical Model for Determining the Accumulated Hydrogen Reserve in Wind-Generated Electricity at Distant Sites. 1719

V.W. Spinadel, F. Gamallo, E. Spinadel (Argentina)

Hydrogen and Profit in Making the World Work for Everyone. 1729

D. Haberman, P.B. Scott (USA)

Volume 3

CHAPTER 5 Materials and Safety

Assessment of Thermal Hazards Resulting from Accidental Liquid Hydrogen 1735

Spills.

P. Bénard, V. Mustafa, M. Ferland, A. Chabbaz, D.R. Hay (Canada)

Analysis of a Large Scale Liquid Hydrogen Spill Experiment Using the **Multi-Phase Hydrodynamics Analysis Code (Champagne)** - part 2. 1745
K. Chitose, Y. Ogawa, M. Hishida, T. Morii (Japan)

Microbiological Influences on Hydrogen Effects on Steels. 1755
R. G. J. Edyvean, J. Benson, I. B. Beech, H.A. Videla (UK/Argentina)

Mechanical Properties of AA5083 **Aluminum** Alloy and its Weld Metal at Low Temperature (Study on low temperature materials used in WE-NET 6). 1763
M. Hayashi, M. Yabumoto, H. Fujii, T. Iida, H. Eguchi (Japan)

Hydrogen Diffusion in Ordered Magnetic Alloys. Pressure Effect. 1773
S.Y. Zaginaichenko, Z. Matysina (Ukraine)

Investigation of Kinetics of Phase Transitions in Zirconium Hydride. 1781
D. Schur, S. Zaginaichenko, B. Tarasov, V. Pishuk (Ukraine/Russia)

Topochemistry and Special Features of Zirconium Reaction with Atomic **Hydrogen**. 1795
D. Schur (Ukraine)

Materials Behaviour in Low Temperature Tribosystems. 1801
W. Hübner, Th. Gradt, Th. Schneider (Germany)

Hydrogen Embrittlement on Austenitic Stainless Steels and their Welds. 1813
A. Hazarabedian, M.I. Luppó, J. Ovejero-Garcia (Argentina)

Materials for Hydrogen Technologies

Hydrogen Manufacture, Storage and Utilisation: The Role of Nickel. 1823
H.C. Angus (UK)

Test Loop for Hydrogen Embrittlement Studies of Steel. 1833
J.L. Aprea, G.M. Bertolino, J. Perez Ipiña, G. Meyer, J.C. Bolcich (Argentina)

Characterisation of Magnetic Refrigeration Materials for Hydrogen Liquefaction. 1843
R.B. Gopal, R. Chahine, T.K. Bose (Canada)

Effects of B-Ferrite Phase on the Mechanical Properties of the Weld Metals of Austenitic Stainless Steels at Low Temperature (Study on low temperature materials used in WE-NET 5). <i>H. Nakagawa, M. Yabumoto, M. Saito, S. Okaguchi, H. Fujii, Y. Wada, T. Iida, T. Ogata (Japan)</i>	1853
Hydrogen Environment Embrittlement of Austenitic Stainless Steels at Low Temperatures (Study on low temperature materials used in WE-NET 7). <i>G. Han, J. He, S. Fukuyama, K. Yokogawa (Japan)</i>	1863
Magnetic Refrigeration Materials for Hydrogen Liquefaction. <i>M. Földeàki, R. Chahine, T.K. Bose (Canada)</i>	1873
Plastic Composite Materials for Cryogenic Storage of Hydrogen. <i>A. Schroder Pedersen (Denmark)</i>	1883
Evaluation of Mechanical Properties of Austenitic Stainless Steels and Aluminum Alloy in Liquid Hydrogen. (Study on low temperature materials used in WE-NET 4). <i>H. Fujii, A. Yamamoto, M. Yabumoto, T. Ogata, M. Hayashi, M. Saito, S. Okaguchi, Y. Wada, H. Nakagawa (Japan)</i>	1893
Hydrogen Microprint Technique Applied to Observe Hydrogen Transportation in Metallic Materials. <i>A. Nagao, S. Kuramoto, M. Kanno (Japan)</i>	1903
Theoretical Investigation of Isoleths of Hydrogen Solubility in Metals and Alloys. <i>S. Zaginaichenko, Z. Matysina, D. Schur, V. Pishuk (Ukraine)</i>	1913
Safety Aspects of Hydrogen and its Application	
System Safety Considerations for a Hydrogen Engine. <i>L.M. Das (India)</i>	1913
Rich Flammability Limits of Fuel Mixtures Involving Hydrogen at Elevated Temperatures. <i>B.B. Ale, I. Wierzba (Canada)</i>	1935
Safety Concept of the Solar Hydrogen Demonstration Plant at Neunburg vorm Wald, Germany. <i>H. Rainer (Germany)</i>	1945

Hydrogen Systems Safety Assessment and Risk-Reduction. 1955
M. Sanai (USA)

Prevention of Detonation Burning in Hydrogen - Air Mixtures with High 1965
Efficient Inhibitor.
V.V. Azatyan, R. G. Ayvazyan, G. K. Vedeshkin, V.A. Iskra (Russia)

The Simulation of a Membrane Reactor for Generating Hydrogen from 1977
Methanol for a P.E.M. Fuel Cell Power System.
J. C. Amphlett, L.M. Kearns, R. F. Mann, B.A. Peppley, J. P. Salvador (Canada)

CHAPTER 6 Standards and Regulations

Photoelectrochemistry

Development of New Materials and Approaches to H₂-Evolving Photocatalytic 1987
Systems.
C.A. Linkous, D.K. Slattery (USA)

Photoelectrochemical Characteristics of Fluorinated SrTiO₃ Photoelectrodes. 1997
A.G. Sarkissyan, K.H. Begoyan, E.L. Ignatyan, E.A. Khachatourian, G.E. Shahnazaryan (Armenia)

Possibilities of the GaAs_{0.6}P_{0.4} - Electrolyte Barrier for Water Photolysis. 2001
E. Vigil, I. Zumeta, C. Nuñez, B. González, M. Fernández (Cuba)

Biological Hydrogen Production

Photoproduction of Hydrogen. Annex 10 of the IEA Hydrogen Programme. 2011
B. Gaudernack (Norway)

Outdoor Operation of Bioreactor using Photosynthetic Bacteria and Effect of 2025
Dark Reaction.
Y. Kitajima, S. Otsuka, Y. Ueno, S. Kawasaki, M. Morimoto (Japan)

Nostoc sp. Strain PCC 73102 and H₂: Knowledge, Research, and 2035
Biotechnological Challenges.
P. Lindblad, A. Hansel, F. Oxelfelt, P. Tamagnini (Sweden)

New Photobioreactor for Application of Biological Hydrogen Production. 2045
M. Modigell, N. Holle (Germany)

Technoeconomic Assessment of Four Biomass-to-Hydrogen Conversion Technologies. <i>P. L. Spath, M. K. Mann (USA)</i>	2057
Biotechnological Approach for Future Use of Solar Energy: Photohydrogen Production by the Green Alga <i>Scenedesmus Obliquus</i> and the Cyanobacterium <i>Synechocystis</i> sp. PCC 6803. <i>R. Schulz, J. Appel, S. Phunpruch, K. Stangier, R. Wünschiers (Germany)</i>	2069
Hydrogen Production by Floating-Type Photobioreactor <i>T. Otsuki, S. Uchiyama, T. Ichikawa, S. Fukunaga (Japan)</i>	2079
Innovative Materials and Processes	
Overall Efficiency Analysis of a High Efficiency Solar-Hydrogen-Generating System. <i>A.R. Shahin, TN. Veziroglu (USA)</i>	2089
Determination of the Solubility of H_2 Gas in Different Electrolytic Solutions of Non-Aqueous Solvents with a Novel Solid State Electrochemical Sensor. <i>M.A. Estes, R. C. V. Piatti, J.J. Podestá (Spain/Argentina)</i>	2107
Synthesis of La-Co-Oxides: Electrocatalytic Activity for the Oxygen Evolution in Alkaline Media. <i>G. Almazan-Torres, SM. Fernández-Valverde (Mexico)</i>	2113
Progress in Thin Film Catalytical Layers Formation for Reduced Temperature SOFC Applications. <i>N.I. Khramushin, G.S. Mezheritsky, Ju. I. Moskalev, .N. Prilezhaeva, I.A. Rezvykh, A. N. Ryzkov (Russia)</i>	2119
Evaluation of Plasma Sprayed Cathodes for Hydrogen Evolution. <i>A.H. Fakeeha, T.F. Al-Fariss, I.S. Al-Mutaz, F.A. Abdelaleem, A. Idriss (Saudi Arabia)</i>	2129
Novel Method for Zirconium Oxide and Rare Earth-Transition Metal Perovskite Oxides Sythesis from Aqueous Solutions. <i>T. Yao, Y.Uchimoto, K. Kajahara (Japan)</i>	2139
An Impedance Analysis of the Doped Iron Oxide - Electrolyte Interface. <i>V.M. Aroutiounian, V.M. Arakelyan, G.E. Shahnazaryan, G.M. Stepanyan, J.A. Turner, S.S. Kocha (Armenia/USA)</i>	2149

Development of a High Pressure Liquid Hydrogen Pump with a Small Diameter. <i>K. Yamane, K. Yasuda, T. Nose, Y. Nakajima, S. Furuhashi (Japan)</i>	2159
Development of a New Reactor Fuel Material: Thermal Properties of U-Th-Zr-H Alloys. <i>H. Suwarno, M. Yamawaki, T. Yamamoto, F. Ono, K. Yamaguchi (Japan)</i>	2169
Mathematical Modelling	
Thermodynamic Analysis and Amorphous Formation in the Mg-Ni-H System. <i>M. Ruda, J. Abriata (Argentina)</i>	2189
Atomistic Simulation of H Effects in Metals and Intermetallics. <i>M. Ruda, D. Farkas, J. Abriata (Argentina/USA)</i>	2199
Instability of a Two-Phase Field in the Presence of a Temperature Gradient. Its Importance in the Case of Hydrogen-Metal Systems. <i>G. E. Fernández, H.E. Troiani, J.P. Abriata (Argentina)</i>	2207
Application of Physical and Mathematical Modeling in Hydrogen Separation and Purification Technology. <i>E.S. Gorkunov, V.M. Makarov, I.N. Veselov, A.B. Vandyshev, J.P. Phedotov, L.L. Muravyev, N.I. Tomofeev, V.A. Rudenco (Russia)</i>	2213
Parametrization of the Density of States Induced by a Hydrogen in a Metallic System. <i>S.A. Serebrinsky, J.L. Gervasoni (Argentina)</i>	2217
Investigations on Reversible System Electrolyzer PEM Fuel Cell. <i>V. Fateev, M. Tsyarkin, I.E. Baranov, E. Lutikova, V. Rusanov (Russia)</i>	2227
Comparison of the Experimental Values of the Density of Hythane with the Existing Equations of State for Natural Gas. <i>R. Okambawa, A. Hourri, J.M. St-Arnaud, T.K. Bose (Canada)</i>	2237
Modeling of Hydrogen Energy Systems of Remote Applications. <i>C.E. Gregoire Padró, V.L. Putsche, M. Fairlie (USA/Canada)</i>	2247
Hydrogen Storage in Carbon Nanotubes: A Montecarlo Simulation of Adsorption at High Pressure. <i>F. Darkrim, P. Malbrunot, D. Levesque (France)</i>	2263

CHAPTER 7 Standards and Regulations

Clean Energy Implementation and Standardization. <i>G. R. Grob (Switzerland)</i>	2271
The Role of International Standardization for the safe practice of Hydrogen. <i>T.K. Bose, D. Allard (Canada)</i>	2283
Sourcebook for Hydrogen Applications. <i>T.K. Bose, J. Ohi (Canada/USA)</i>	2291
Role of the National Hydrogen Association in Codes and Standards Activities. <i>J. G. Hansel, M. Fairlie, A. Coutts, R. L. Mauro, K. I. Miller (USA)</i>	2309