| Time            | SUNDAY, OCT 28th |
|-----------------|------------------|
| 10:00-<br>21:00 | Registration     |
| 18:00-<br>21:00 | Drinks & Snacks  |

| Time  |   | MONDAY, OCT 29th  |  |
|-------|---|---|--|
| 8:00  |   | Registration  |  |
| 9:00  |   | Opening: Room A+B<br>Chair: Min Zhu   |  |
| 9:20  |   | Chair: Min Zhu, Room A+B Plenary 1: Gavin Walker Metal hydrides for energy systems, 268 (AbstractID)  |  |
| 10:00 |   | Coffee Break, Group photo   |  |
| 10:20 |   | Chair: Min Zhu, Room A+B Plenary 2: Lijun Jiang Progress of Hydrogen Energy Technology in China, 2  |  |
| 11:00 | Chair: Min Zhu, Room A+B Plenary 3: Tom Autrey Accelerating Development of Hydrogen Storage Materials Through HYMARC, a U.S. Department of Energy National Laboratory-Led Consortium, 255 |   |  |
| 11:40 |   | Buffet Lunch (12:00-14:00)  |  |
|       | Room A (Chair: Michael Felderhoff)  | Room B (Chair: Petra de Jongh)  | Room C (Chair: Evan Gray)  |
| 14:00 | MoOA01 Invited A3: Yoshitsugu Kojima Hybrid hydrogen batteries for renewable energy, 70   | MoOB01 Invited M2: Zhenguo Huang<br>Hydrogen storage: Boron as a key element, 252   | MoOC01 Invited F1: Vladimir Antonov Phase transformations in the water-hydrogen system at pressures up to 10 kbar, 190                             |
| 14:30 | MoOA02 A1: Jose Bellosta von Colbe Design and testing of an amide/imide-based hydrogen storage tank, 136  | MoOB02 M2: Godwin Severa Kinetic enhancement of bulk, direct hydrogenation of magnesium boride to magnesium borohydride in presence of additives, 124 | MoOC02 F1: Mathias Jørgensen<br>Crystal structures of potential solid state electrolytes<br>MB <sub>10</sub> H <sub>10</sub> (M = Ca, Sr, Mn), 117 |
| 14:50 | MoOA03 A1: David Grant Metal hydride compressor optimisation, 232   | MoOB03 M2: Yuki Nakagawa<br>Interaction between LiAlH <sub>4</sub> and hexagonal boron<br>nitride, 127  | MoOC03 F1: Erika Michela Dematteis Polymorphic transitions in closo-boranes, 246   |
| 15:10 | MoOA04 A1: Zhinian Li Mass energy storage based on metal hydrides and its demonstration in a wind/solar renewable energy system, 134  | MoOB04 M2: Loris Lombardo Complex hydrides for hydrogen storage, 131  | MoOC04 F1: Sanliang Ling Polymorphism in metal hydrides: a first-principles study, 219   |

| 15:30 | Coffee Break  |  |   |
|-------|---|--|---|
|       | Room A (Chair: David Grant)   | Room B (Chair: Zhenguo Huang)  | Room C (Chair: Vladimir Antonov)  |
| 15:50 | MoOA05 Invited A6: Michael Felderhoff Simple magnesium powder / metal powder mixtures for energy storage applications, 82       | MoOB05 Invited A3: Petra de Jongh<br>Light metal hydride composites as solid state<br>electrolytes, 31                                       | MoOC05 Invited F1: Evan Gray Dislocation annealing in hydrogen cycled Palladium and the relationship to pressure hysteresis, 208              |
| 16:20 | MoOA06 A6: Sekhar Bhogilla Satya Design of a hydrogen compressor for hydrogen fueling stations, 18                              | MoOB06 A3: Kasper Moeller  Molten higher metal boranes for nanoconfinement of solid-state electrolytes, 110                                  | MoOC06 F3: Hongru Zhang Study and simulation of non-stationary processes of hydrogen diffusion in Titanium, 178                               |
| 16:40 | MoOA07 M1: Shahrouz Nayebossadri Development of a high-pressure Ti-Mn based hydrogen storage alloy for hydrogen compression, 53 | MoOB07 F6: Angelina Gigante A straightforward and scalable synthesis of borohydride clusters for electrolyte applications, 49                | <b>MoOC07 F3: Aleksandr Rokhmanenkov</b><br>Simulation of hydrogen thermal desorption and stability<br>titanium hydrides TiH <sub>x</sub> , 8 |
| 17:00 | MoOA08 A1: Suganthamalar Selvaraj V-Ti-Cr alloy for metal hydride hydrogen compressor, 73                                       | MoOB08 A6: Yao Zhang<br>Ionic conductivities of LiBH <sub>4</sub> -based composites, 12  | MoOC08 F2: Markus Wilde Revealing hydrogen dynamics at metal surfaces with 15N nuclear reaction analysis, 226                                 |
| 17:20 | MoOA09 A6: Mykhaylo Lototskyy High pressure hydrogen compression utilizing metal hydrides: achievements and opportunities, 185  | MoOB09 A3: Romain Moury High pressure phase transitions for Na <sub>2</sub> B <sub>12</sub> H <sub>12</sub> a solid electrolyte material, 69 | MoOC09 F3: Zhongmin Wang First-principles investigation of atomic hydrogen adsorption and diffusion on/into Mo-doped Nb (100) surface, 165    |
| 17:40 | Buffet Dinner (18:00-20:00)   |  |   |
| 18:00 | Free evening  |  |   |

| Time  |  | TUESDAY, OCT 30th  |  |
|-------|--|--|--|
| 8:00  | Registration   |  |  |
|       | Room A (Chair: Gavin Walker)   | Room B (Chair: Kwo Young)  | Room C (Chair: Junmin Yan)   |
| 8:30  | TuOA01 Invited M1: Etsuo Akiba Activation of TiFe-based hydrogen absorbing alloys, 209   | TuOB01 Invited A3: Dag Noréus New processes simplify NiMH recycling and extend cycle life, 306   | TuOC01 Invited M3: Qiang Xu Metal nanoparticle-catalyzed hydrogen generation from liquid-phase chemical hydrides, 281                                  |
| 9:00  | TuOA02 F1: Jean-Louis Bobet New ternary RE-TM-Mg alloys for Hydrogen energy applications: clean production and storage, 94   | TuOB02 A1: Véronique Charbonnier Stacking structures for application as negative electrode in Ni-MH batteries, 102                         | TuOC02 M4: Lifang Jiao Metal Phosphides@metal Hydroxides nanostructure as a robust bifunctional water splitting electrode, 120                         |
| 9:20  | TuOA03 M1: Ivan Romanov Influence of Copper on heat transfer and PCT- isotherms of La <sub>0.9</sub> Ce <sub>0.1</sub> Ni <sub>5</sub> -alloy fillings, 37   | TuOB03 M1: Lingkun Kong A BCC-C14 alloy suitable for EV application of NiMH battery, 13  | TuOC03 M3: Yuichiro Himeda Hydrogen production from formic acid catalyzed by iridium complexes, 288  |
| 9:40  | TuOA04 M1: Judith Monnier  Hydrogen sorption properties and aqueous corrosion mechanisms of rare-earth-based intermetallics, 119   | TuOB04 A3: Junxian Zhang Reversibility of the electrochemical conversion of MgH <sub>2</sub> with Lithium: thin films as model system, 122 | <b>TuOC04 M3: Kandavel Manickam</b> Lithium hydride based hydrogen generator for on-board applications, 182  |
| 10:00 | TuOA05 Invited M1: Jacques Huot Crystal structure and hydrogen storage properties of as-cast and heat-treated Ti <sub>0.5</sub> Zr <sub>0.5</sub> (Mn <sub>1-x</sub> Fe <sub>x</sub> )Cr1, x=0, 0.2, 0.4, 32 | TuOB05 Invited A3: Tayfur Ozturk Surface modified metal hydrides as negative electrodes in NiMH batteries, 191                             | TuOC05 Invited A3: Xiangdong Yao Electrocatalysis for water splitting, 258   |
| 10:30 |  | Coffee Break   |  |
|       | Room A (Chair: Etsuo Akiba)  | Room B (Chair: Brandon Wood)   | Room C (Chair: Qiang Xu)   |
| 10:50 | TuOA06 Invited F4: Takayuki Ichikawa<br>Surface modification of Ti and TiFe, 239   | TuOB06 Invited M2: Torben R. Jensen From metal borohydrides to closo-borates from hydrogen storage to battery materials, 188               | TuOC06 Invited A6: Ping Wang Polymer-mediated Co–B nanoparticles for catalyzing the hydrolysis of NaBH4, 325   |
| 11:20 | TuOA07 M1: Peng Lyu Microstructure evolution, phase transformation and enhanced hydrogenation performance of TiFe alloy with solid dissolution of zirconium and vanadium, 144                                | TuOB07 A3: Kwo Young Future of proton-conducting metal hydride batteries, 27   | TuOC07 M3: Hajime Kawanami Interconversion between CO <sub>2</sub> and HCOOH catalyzed by PdAu Nano Particles Supported by Reduced Graphene Oxide, 292 |
| 11:40 | TuOA08 F4: Philippe Nardin Changing the oxide layer on the intermetallics surface and its effect on the H <sub>2</sub> storage characteristics of TiFe based alloys, 231                                     | <b>TuOB08 A3: Takashi Komoto</b> Study of MH and high pressure H <sub>2</sub> hybrid battery system, 80                                    | <b>TuOC08 F2: Wen Luo</b> Electroreduction of CO <sub>2</sub> to HCOOH on porous Indium catalysts, 132   |
| 12:00 | TuOA09 M1: Carmel Greenwood  Microstructural effects of Vanadium additions on hydrogen storage behaviour of TiFe, 247  | TuOB09 Invited F1: Florian Mertens Hydrogenation reactions for the thermodynamic characterization of Lithium ion battery materials, 75     | TuOC09 F2: Invited F2: Jun-Min Yan Hydrogen generation/storage in formic acid and ammonia over metallic catalysts at room temperature, 284             |
| 12:30 |  | Buffet Lunch (12:00-14:00)   |  |

|                 | Room A (Chair: Zhengxiao Guo)  | Room B (Chair: Torben R. Jensen)  | Room C (Chair: Hyunchul OH)   |
|-----------------|--|---|---|
| 14:00           | TuOA10 Invited M1: Jianxin Zou Hydrogen sorption behaviors of high-pressure-torsion compacted Mg based composite powders, 352  | TuOB10 Invited M2: Brandon Wood Understanding reactive interfaces in complex metal hydrides through multiscale simulations, 311   | TuOC10 Invited F6: Chiara Milanese Carbon based materials for solid state hydrogen storage and energy storage, 62       |
| 14:30           | TuOA11 F4: Luca Pasquini In the secret garden: hydrogen (de)sorption in MgH <sub>2</sub> - TiH <sub>2</sub> nanoparticles below 150°C, 193                               | TuOB11 M2: Yigang Yan Revisiting the role of octahydrotriborates in the de-/re-hydrogenation reaction of metal borohydrides, 179  | TuOC11 M4: Yang Heena Carbon based hydrogen storage materials, 130  |
| 14:50           | TuOA12 M1: Yunfeng Zhu Enhancement of hydrogen storage performances of magnesium-based materials by nanosizing and catalyzing, 40  | <b>TuOB12 F5: Pistidda Claudio</b> A hydride composite featuring mutual destabilisation and reversible boron exchange: Ca(BH <sub>4</sub> ) <sub>2</sub> -Mg <sub>2</sub> NiH <sub>4</sub> , 95   | TuOC12 M4: Lubna Naheed High pressure hydrogen storage in porous carbon materials, 147                                  |
| 15:10           | TuOA13 M1: Abdul Majid Noor Aliah Improved hydrogen desorption properties of magnesium hydride with TiFe <sub>0.8</sub> Mn <sub>0.2</sub> , graphite and Fe addition, 15 | <b>TuOB13 M2: Hujun Cao</b> Synthesis and application of ternary transition metal amide, 46   | TuOC13 A6: Xiao Li Adsorption of light noble gases in $\gamma$ -Mg(BH <sub>4</sub> ) <sub>2</sub> , 118                 |
| 15:30           |  | Coffee break  |   |
|                 | Room A (Chair: Jianxin Zou)  | Room B (Chair: Florian Mertens)   | Room C (Chair: Volodymyr Yartys)  |
| 15:50           | TuOA014 Invited F1: Zhengxiao Guo Ensuring hydrogen purity from generation, storage and delivery for cost-effective fuel cell power, 355                                 | TuOB014 Invited M1: Yongfeng Liu Nano-Ti-catalyzed NaAlH <sub>4</sub> and MgH <sub>2</sub> for advanced hydrogen storage, 198   | TuOC014 M1: Moe Nygård Magnus A roadmap towards reversible room-temperature hydrogen storage in high-entropy alloys, 74 |
| 16:20           | TuOA15 A1: Vasily Borzenko Metal hydride storage for FC power units: system integration, 167   | TuOB15 F6: Biliskov Nikola From ammonia Borane to single- and bimetallic amidoboranes, 21   | TuOC15 M1:Jakub Cizek Hydrogen absorption in refractory metal high entropy alloys, 39                                   |
| 16:40           | TuOA16 F8: Anna-Lisa Chaudhary Thermo-mechanical behaviour of a high pressure metal hydride storage system using FEM simulations, 158                                    | <b>TuOB16 M2: Tessui Nakagawa</b> Dehydrogenation of ammonia Borane with metal hydride and ionic liquid: high quality, speed, and capacity, 241   | TuOC16 F6: Walter Botta Hydrogen storage in high entropy alloys, 51   |
| 17:00           | TuOA17 A1: Jinsheng Xiao Thermal management of metal hydride hydrogen storage system using phase change materials, 14  | TuOB17 M2: Rafał Owarzany NH <sub>4</sub> BH <sub>3</sub> NH <sub>2</sub> BH <sub>2</sub> NH <sub>2</sub> BH <sub>3</sub> or: There is lots of room between NH <sub>4</sub> BH <sub>4</sub> and -NH <sub>2</sub> BH <sub>2</sub> -, 150 | <b>TuOC17 M1: Ek Gustav</b> Hydrogen sorption in TiNbZrHf <sub>X</sub> (X=Ta, V) high entropy alloys, 84                |
| 17:20           | TuOA18 A6: Dan Zhu Parametric studies of the on board metal hydride hydrogen storage system based on real operating data, 111  | TuOB18 Invited M2: Kondo-Francois Aguey-Zinsou<br>Hydrogen storage in complex hydrides-new perspectives<br>toward reversible systems, 87  | <b>TuOC18 M1: Marcello Baricco</b> NbTiZrV-based high entropy alloys for hydrogen storage, 225                          |
| 17:40           |  | Buffet Dinner (18:00-20:00)   |   |
| 19:00-<br>21:00 | Tu   | esday Poster Session: Room A, TuP-1 – TuP-82, Room A  | 4   |

| Time  |  | WEDNESDAY, OCT 31ST   |  |
|-------|--|---|--|
| 8:00  | Registration   |   |  |
|       | Room A (Chair: Young Whan Cho)   | Room B (Chair: Bjørn C. Hauback)  | Room C (Chair: Liuzhang Ouyang)  |
| 8:30  | WeOA01 Invited M1: Yumiko Nakamura Study on local structure of metal hydrides for hydrogen storage, 199  | WeOB01 Invited A3: Kisu Kazuaki Complex hydrides as solid electrolytes for rechargeable batteries, 195  | WeOC01 Invited F7: Hyunchul OH Recent progress in the development of metal-organic frameworks for hydrogen isotopes separation, 125                        |
| 9:00  | WeOA02 M1: Jacob Isaac<br>Thermodynamically stable ternary LaMgPdH₅ hydride<br>based on ZrNiAl type intermetallic, 301                             | WeOB02 A3: Steffen Riis Højbjerg Jensen M <sub>x</sub> B <sub>12</sub> (OH) <sub>12</sub> as new solid state ion conductors (M = Li, Na, K and Cs), 114   | WeOC02 A4: Dmitry Dunikov Metal hydride separation of a hydrogen/methane mixture, 206  |
| 9:20  | WeOA03 A5: Ekaterina Stepanova Hydrogen interaction with the Ti-6.5Al-3.5Mo-1.5Zr-0.3Si parts produced by electron beam melting, 184               | WeOB03 A3: Tengfei Zhang<br>Controlling Lithium ionic conductivity in LiBH <sub>4</sub> by NH <sub>3</sub> ,<br>265   | WeOC03 F7: Linda Zhang Hydrogen isotopes separation in porous organic cage molecules, 176  |
| 9:40  | WeOA04 M1: Yongtao Li Hydrogen-induced Magnesium–Zirconium interfacial coupling: enabling fast hydrogen sorption at lower temperatures, 23         | WeOB04 A3: Shiyou Zheng Borohydride based super Li-ion conductors as electrolyte for all solid state Li batteries, 285  | <b>WeOC04 A5: F5: Kazakov Alexey</b> Experimental investigations of AB <sub>5</sub> -type alloys for hydrogen separation from biological gas streams, 152  |
| 10:00 | WeOA05 Invited M1: Kouji Sakaki Local structures in hydrides of Vanadium based BCC alloys, 92  | WeOB05 A3: Zbigniew Lodziana Solid state electrolytes with transition metals closoborates, 243  | WeOC05 Invited A4: Semen Klyamkin Metal-polymer composites for hydrogen separation, 128  |
| 10:30 |  | Coffee Break  |  |
|       | Room A (Chair: Yumiko Nakamura)  | Room B (Chair: Kondo-Francois Aguey-Zinsou)   | Room C (Chair: Semen Klyamkin)   |
| 10:50 | WeOA06 Invited M1: Abdul Jimoh Microstructure and hydrogen storage characteristics of Rhodium substituted Ti-V-Cr alloys, 9                        | WeOB06 Invited M2: Bjørn C. Hauback Rare-earth borohydrides – crystal structures and thermal properties, 26   | WeOC06 A6: Alastair Stuart Thermally-driven solar air conditioning, 229  |
| 11:20 | WeOA07 F1: Chaoling Wu Microstructures and hydrogen storage characteristics of V-Ti-Cr-Fe alloy refined by mechanical milling and heat treated, 48 | WeOB07 M2: Jakob Grinderslev Synthesis, crystal structure, thermal and magnetic properties of rare earth metal borohydrides, 112  | <b>WeOC07 A6: Ferry Nugroho</b> Nanoparticle-polymer hybrid optical hydrogen sensors, 98   |
| 11:40 | <b>WeOA08 F6: Giovanni Capurso</b> Efficient H <sub>2</sub> storage by novel air-stable polymer-reactive hydride composites, 155                   | <b>WeOB08 F6: Michael Heere</b> Synthesis, polymorphic transitions and a hint of stepwise negative thermal expansion in Pr(BH <sub>4</sub> ) <sub>3</sub> , 45                                  | WeOC08 M4: Takuji Ube Fabrication of Palladium thin film with three dimensional nano-network structure for hydrogen gas sensor, 196                        |
| 12:00 | WeOA09 F2: Chengshang Zhou Titanium based amorphous alloy catalysts for improving hydrogen storage properties of magnesium hydride, 22             | WeOB09 F6: Agnieszka Starobrat Mixed-metal Scandium borohydrides MSc(BH <sub>4</sub> ) <sub>4</sub> , M=Rb, Cs, and unexpectedly rich polymorphism of LiSc(BH <sub>4</sub> ) <sub>4</sub> , 151 | WeOC09 A6: Iwan Darmadi Rationally designed binary and ternary alloy nanoparticles for poisoning-resistant hydrogen detection with sub-second response, 19 |
| 12:20 |  | Packed Lunch  |  |
| 13:00 |  | Excursion (packed lunch on bus)   |  |
| 18:00 |  | Welcome Banquet   |  |

| Time  | THURSDAY, NOV 1st  |   |  |
|-------|--|---|--|
| 8:00  | Registration   |   |  |
|       | Room A (Chair: Qian Li)  | Room B (Chair: Craig Buckley)   | Room C (Chair: Xuebin Yu)  |
| 8:30  | ThOA01 Invited F6: Kohta Asano Destabilization of Mg hydride: self-organized nanoclusters in immiscible system, 29                         | ThOB01 Invited M2: Craig Jensen Reversible hydrogenation of magnesium boride and magnesium boranes to magnesium borohydride, 135  | ThOC01 Invited: Lixian Sun Enhanced hydrogen storage by doping catalysts and nanoconfinement, 322  |
| 9:00  | ThOA02 F6: Shigehito Isobe Hydrogenation/dehydrogenation properties of metal nanoparticles supported on graphene, 148                      | ThOB02 M3: Parviz Hajiyev Unraveling the effect of the alkali cation on the dehydrogenation properties of ammine Zinc borohydrides, 181   | <b>ThOC02 M1: Bao Zhang</b> Synergic catalytic effects of Mg(BH <sub>4</sub> ) <sub>2</sub> and CNTs on the desorption properties of Li-Mg-N-H system, 316 |
| 9:20  | ThOA03 A1: Khadija Alsabawi Kinetic enhancement of the sorption properties of MgH <sub>2</sub> with the additive titanium isopropoxide, 10 | ThOB03 A1: Yinzhe Liu Dehydrogenation and rehydrogenation of a low-melting-point Lithium and Potassium borohydride mixture with nano-sized Ni, 146  | <b>ThOC03 M2: Keita Nakajima</b> NMR and FTIR study for NH <sub>3</sub> absorbing process of NaBH <sub>4</sub> , 47  |
| 9:40  | ThOA04 M1: Yanshan Lu A novel immiscible Mg-Mn system to destabilize the thermal stability of MgH <sub>2</sub> , 319                       | ThOB04 F3: Alexander Skripov Low-temperature rotational tunneling of BH <sub>4</sub> groups in Lithium benzimidazolate-borohydride Li <sub>2</sub> (blm)(BH <sub>4</sub> ): Nuclear Magnetic Resonance and neutron scattering studies, 30 | ThOC04 F2: Piotr Antoni Orłowski Catalytic properties of Vanadium and its compounds for evolution of hydrogen from its chemical stores, 142                |
| 10:00 | ThOA05 Invited M1: Huaiyu Shao Relatively stable metastable nano alloys for energy storage, 321  | <b>ThOB05 Invited M2: Hai-Wen Li</b> Facile synthesis of metal Boron hydrides using decaborane, 157   | ThOC05 F2: Fei Chang Effect of pore confinement of alkali amides on low temperature NH <sub>3</sub> decomposition catalysis, 215                           |
| 10:30 |  | Coffee Break  |  |
|       | Room A (Chair: Kohta Asano)  | Room B (Chair: Craig Jensen)  | Room C (Chair: Lixian Sun)   |
| 10:50 | ThOA06 Invited F6: Young Whan Cho Mg-based metal hydrides for stationary hydrogen storage, 297   | ThOB06 Invited A3: Jie Zheng New applications of rare earth hydrides in electrochemistry, 318   | ThOC06 Invited M1: Xuebin Yu Nanostructured hydrides for improved hydrogen storage properties, 253   |
| 11:20 | ThOA07 Invited F2: Qian Li Mg-based nanocomposites with superior cycling stability for hydrogen storage, 317                               | ThOB07 F6: Wegner Wojciech  Novel magnesium and Lanthanide borohydrides systems and products of their thermal decomposition, 169  | ThOC07 F2: Adams Marcus A new surface resistance approach to transient models of hydrogenation that better predict kinetics close to equilibrium, 171      |
| 11:40 | <b>ThOA08 A1: Marcus Tegel</b> MgH <sub>2</sub> -based PowerPaste for infrastructure-independent hydrogen solutions, 256                   | <b>ThOB08 F6: Terry Humphries</b> Stability and bonding of fluorine substituted metal hydrides, 220   | ThOC08 F3: Rene Albert Thermal conductivity measurements of magnesium hydride powder under working conditions, 101   |

| 12:00 | ThOA09 A1: Lars Röntzsch Volume expansion of metal hydride-graphite composites during cyclic hydrogen uptake and release, 230 | <b>ThOB09 M3: Igor Milanovic</b> Sodium amidoborane synthesis by mechanochemically pretreated ammonia borane, 41                                   | ThOC09 F6: Katherine Hurst Reproducibility of hydrogen volumetric capacity measurements, 249   |
|-------|---|--|--|
| 12:20 |   | Buffet Lunch (12:00-14:00)   |  |
|       | Room A (Chair: Martin Dornheim)<br>IEA special session, 25min per talk  | Room A (Chair: Jie Zheng)  | Room A (Chair: Astrid Pundt)   |
| 14:00 | ThOA10 IEA: Michael Hirscher Hydrogen-based energy storage" hydrogen storage in porous materials, 290                         | <b>ThOB10 Invited M2: Toyoto Sato</b> Formation process of a complex transition metal hydride. 59  | ThOC10 Invited F6: Ronghai Yu Composition optimization and surface modification in ZrCo based hydrogen storage alloys, 354           |
| 14:30 | ThOA11 IEA: Volodymyr Yartys  Magnesium based materials for hydrogen based energy storage: past, present and future, 300      | ThOB11 F6: Fermin Cuevas Mechano-synthesis of light-weight hydrides: elucidating the reaction mechanisms, 96                                       | <b>ThOC11 F4: Liang Gao</b> Deuterium super-saturation in tungsten surfaces by plasma irradiation with sub-threshold ion energy, 174 |
| 14:50 | ThOA12 IEA: Andreas Zuttel Beyond metal hydrides: the 20 years of complex hydrides for hydrogen storage, 106                  | ThOB12 F6: Hiroyuki Saitoh High-pressure synthesis of aluminum-based hydrides, 212   | ThOC12 F3: Takahiro Ozawa Isotope effect of metastable-to-stable hydrogen diffusion at low temperature in Pd ultrathin film, 216     |
| 15:10 | ThOA13 IEA: Michel Latroche  Metallic and complex hydrides for electrochemical storage of energy, 280                         | ThOB13 A1: Kateryna Peinecke The influence of syngas on complex aluminium hydride during hydrogenation   | <b>ThOC13 M4: Henrietta Langmi</b> Shaping of UIO-66 for high density hydrogen storage, 97   |
| 15:40 |   | Coffee Break   |  |
|       | Room A (Chair: Andreas Zuttel)<br>IEA special session, 25min per talk   | Room B (Chair: Toyoto Sato)  | Room A (Chair: Ronghai Yu)   |
| 16:00 | ThOA014 IEA: Bill David To be determined  | ThOB014 F2: Manshi Ohyanagi Mg-hydrogenation by metal oxide catalysts with nearly zero apparent activation energy,163                              | <b>ThOC014 Invited F8: Astrid Pundt</b> Tuning ultra-high mechanical stress states in thin films, 350                                |
| 16:30 | ThOA15 IEA: Ping Chen Ammonia synthesis under mild condition, 149   | ThOB15 M3: Teng He Metallated organic hydrides for hydrogen storage, 139   | <b>ThOC15 F4: Takashi Harumoto</b> Film Structure evolution during cyclic hydrogen loading on Palladium thin films, 133              |
| 16:50 | ThOA16 IEA: Craig Buckley Heat storage using metal hydrides: an IEA hydrogen Task 32 Perspective, 205                         | ThOB16 M3: Kun Zhao In situ control of the adsorption species in CO <sub>2</sub> hydrogenation: determination of intermediates and byproducts, 113 | ThOC16 F2: Jose-Ramón Ares Unveiling critical parameters on hydrogenation properties of Magnesium films, 189                         |
| 17:10 | ThOA17 IEA: Martin Dornheim Application of hydrides in hydrogen storage and compression, 307                                  | ThOB17 M2: Qiwen Lai A nickel - ammonia borane nanocomposite leading to a reversible B-N-H system, 76  | <b>ThOC17 F5: Daniel Azofeifa</b> Dielectric function of Niobium thin films as function of hydrogen absorption, 3                    |
| 17:30 | N/A   | ThOB18 M1: Huaijun Lin Hydrogen storage properties of Mg-based nanocomposites and amorphous alloys prepared via melt spinning, 270                 |  |

| 18:00           | Buffet Dinner (18:00-20:00)                             |
|-----------------|---|
| 19:00-<br>21:00 | Thursday Poster Session: Room A, ThP-1 – ThP-82, Room A |

| Time  | FRIDAY, NOV 2nd  |
|-------|--|
| 9:00  | Chair: Andrea Zuttel, Room A  Plenary 4: Jun Chen  Combination of Lightweight Materials and Nanostructures for Efficient Hydrogen Storage, 1 |
| 9:45  | Chair: Andrea Zuttel, Room A Plenary 5: Tatsuoki Kono Overview of Hydrogen Energy System from Renewable Energy Resources, 3                  |
| 10:30 | Closing Session  |
| 11:00 | Buffet Lunch & Departure   |