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Scientific Instruments and Services

for

Hydrogen Technologies

Dr. Karl J. Gross: CEO and Founder of Hy-Energy.



Dr. Gross has been doing research and development in the field of lightweight hydride materials for hydrogen storage since 1993. He received the Young Investigator award from the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy for his pioneering research of solid-state hydrogen storage technology. In 2002, he was named an "R&D Star To Watch" by Industry Week magazine.

Dr. Gross is the founder of Hy-Energy LLC, a high tech firm specialized in the development of clean energy technologies through science-based problem solving. He has established close collaborations with worldwide leading hydride research teams and has published extensively in the field.

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Dr. Ned T. Stetson: Official Representative.



Dr. Stetson has over 20 years of experience in Chemistry and Materials, with over 13 years on hydrogen storage materials. His experience includes the development of metal hydride-based hydrogen storage systems, from prototype to commercial product. Dr. Stetson has been active in leading the development of appropriate codes and standards for metal hydride systems, including as convener of the international working group developing the International Standard Organization's standard for metal hydride hydrogen storage systems. He has developed and carried out safety certification programs on hydrogen storage systems, including Failure Mode and Effects Analysis (FMEA), Hazardous Operations reviews (HazOps), engineering analyses and safety testing. Dr. Stetson has successfully received regulatory approvals for metal-hydride hydrogen storage vessels.

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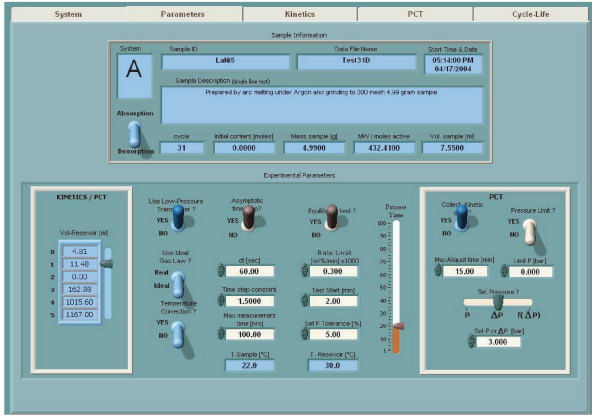
PCTPro - 2000⁺ Gas Sorption Analyzer



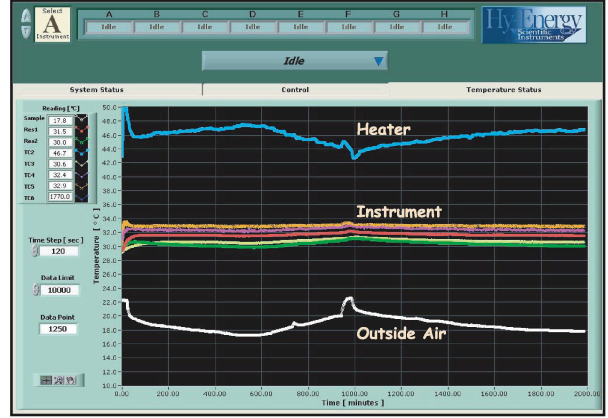
*Patent Pending

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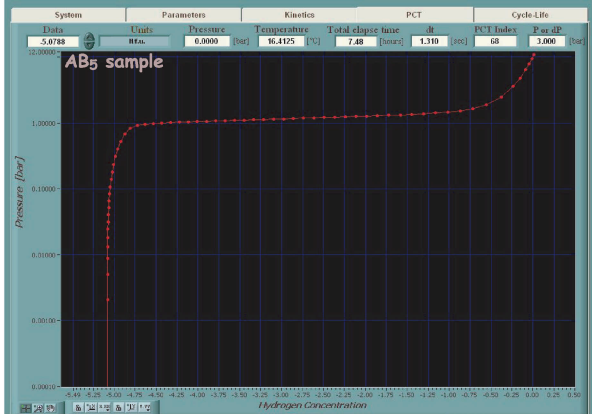
Experimental Setup



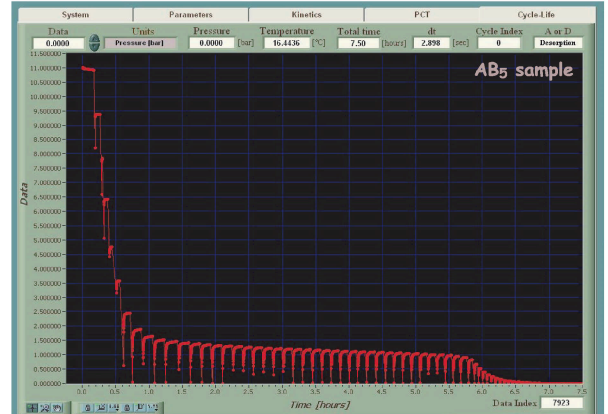
Controlled Instrument Temperature



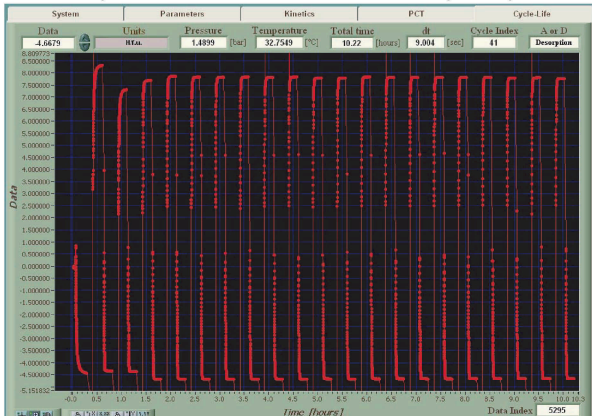
Desorption PCT Measurement



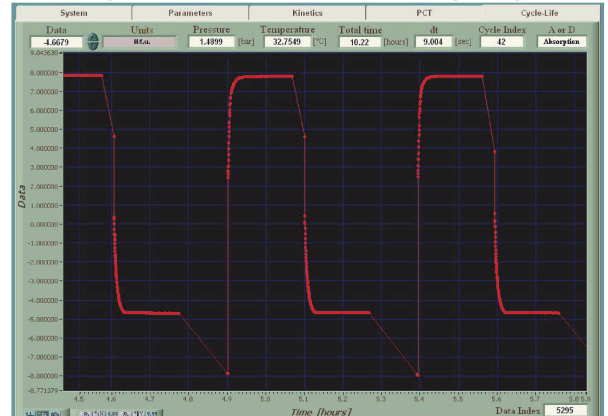
PCT: Pressure vs. time



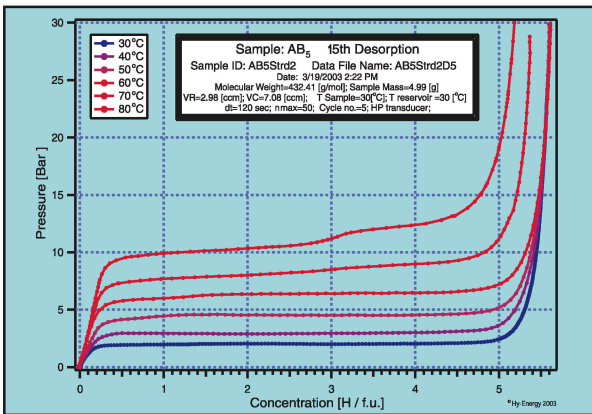
Cycle Life Measurements: Capacity



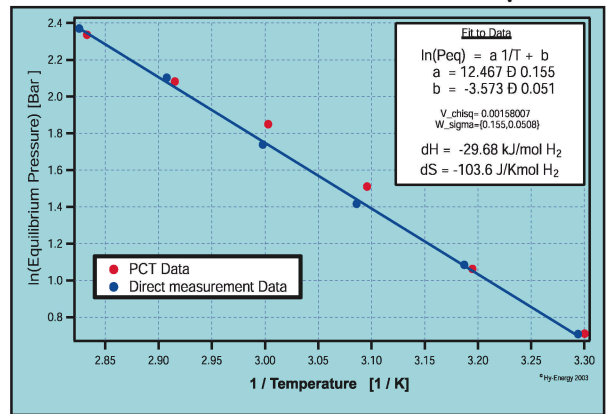
Cycle Life Measurements: Capacity



Results: PCT measurements



Results: van't Hoff Plot AB5 sample



New !

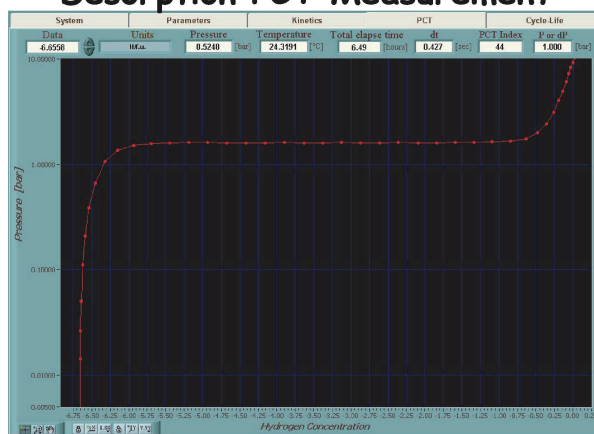
Micro-Doser Attachment

For Sample Sizes 1-500 mg

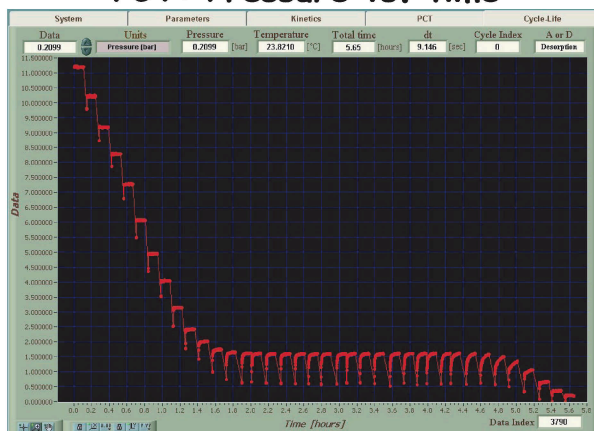
100 mg LaNi₅



Desorption PCT Measurement



PCT: Pressure vs. time



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